The OIL WEEKLY

A Journal for
Oil and Gas Producers and Field Men

HOUSTON
LOS ANGELES
NEW YORK
FT. WORTH
TULSA
CHICAGO

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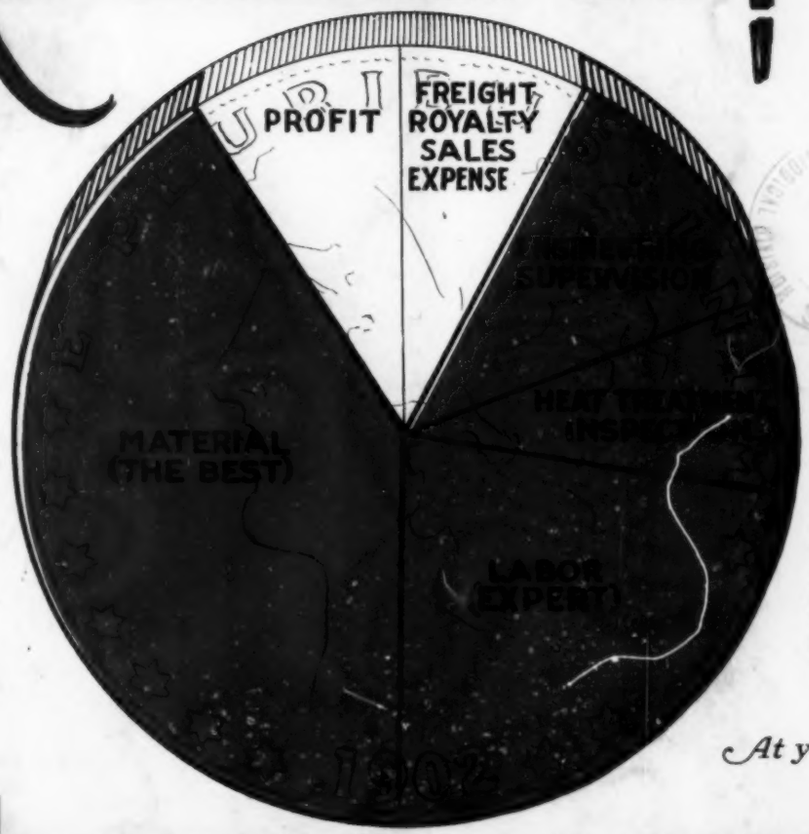
Where does your Tool Joint DOLLAR GO?



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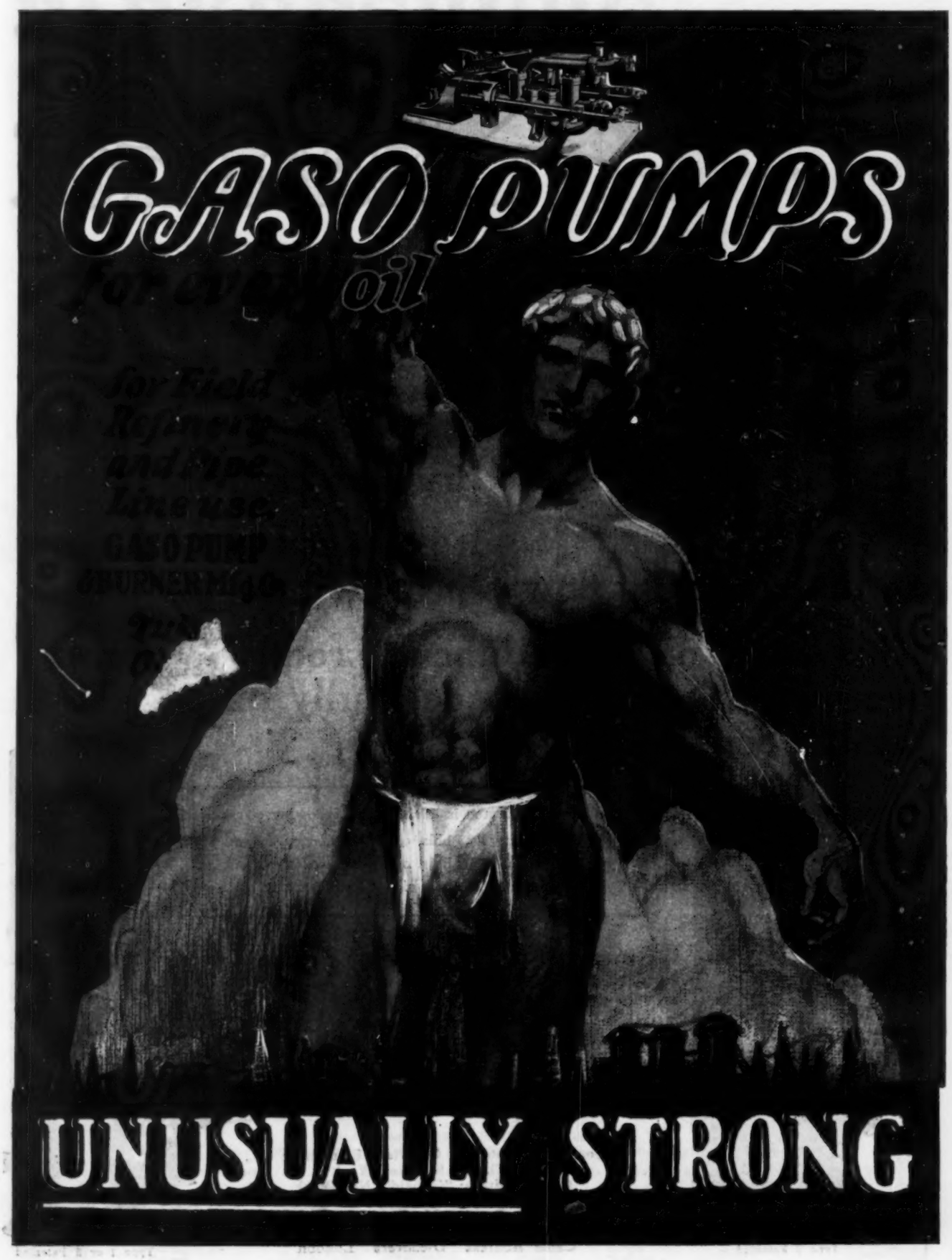
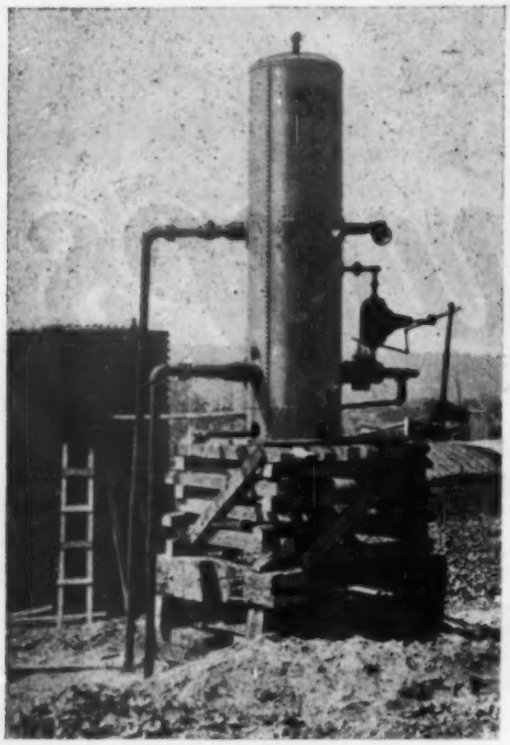

GASO PUMPS
oil
UNUSUALLY STRONG



SMITH OIL AND GAS SEPARATOR

The Smith Oil and Gas Separator (Type 2) shown above is on the Essie Brunner lease of the Page Interests near Brunner Station.

It is placed on blocking so that a gravity flow is provided for the oil.

This is one of many difficult production problems which is being successfully handled by Smith Separators.

Type 3 Patented

The Smith Separator is made in the following sizes:
Type 1—Capacity 5000 bbls. oil, 10 million cu. ft. gas.
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Texas Office: 4837 Swiss Ave., Dallas

Export Representative, Oil Field Equipment Co.,
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PARKERSBURG STEEL DERRICKS

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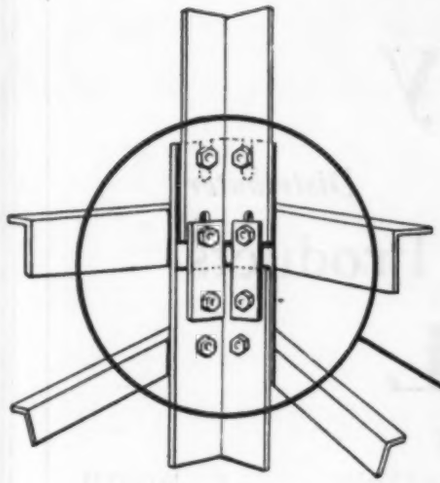
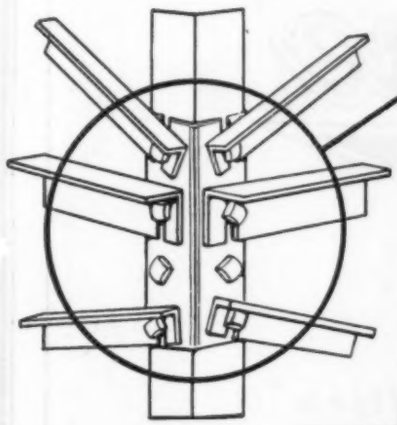
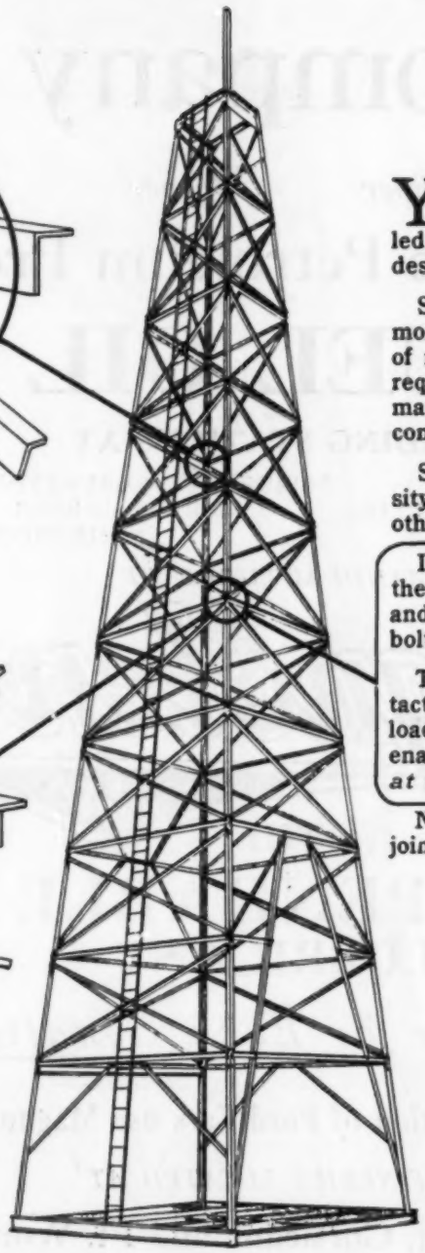
—Reinforced



After the nuts are tightened, the joint is secure. Note butt-to-butt contact



Outside view of joint, with girts and braces in position



YEARS of oilfield experience with wide knowledge of every type of steel derrick led us to select a successful *structural* steel design and *improve* it.

Structural shapes are readily available in more sizes and weights than any other form of manufactured steel. Due to this, derrick requirements can be more closely approximated in *structural* shapes than in any other commercial shapes, *and at less expense.*

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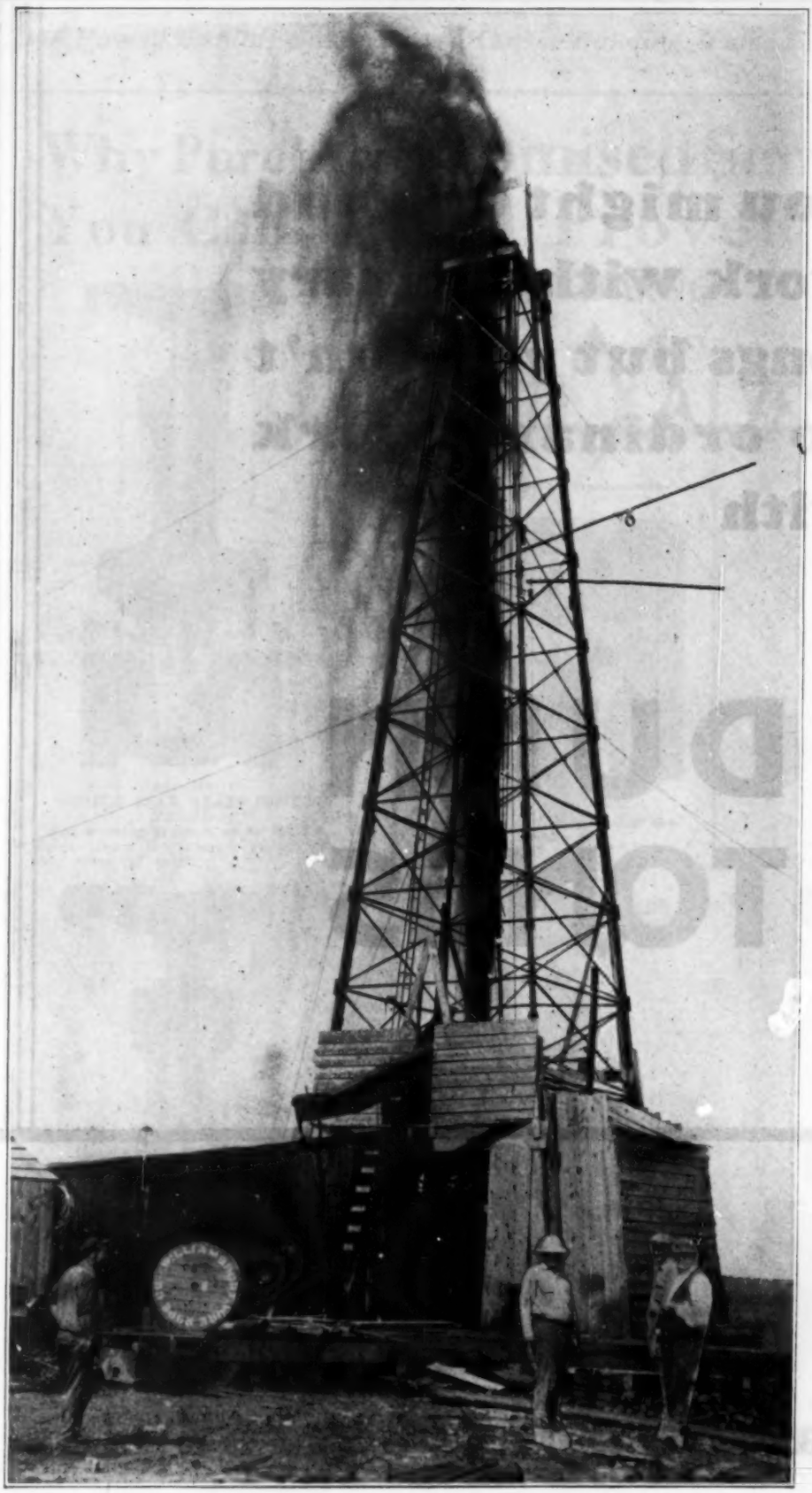

BRINGING HOME THE BACON

Ask the men about it—Extreme right—C. A. Baker, Field Supt., The Carter Oil Co., Burbank, Okla. Center—M. J. Lowe, Jr., Williamsport Wire Rope Co., Shidler, Okla. Extreme left—Laurie Bowman, Farm Boss, The Carter Oil Co., Burbank, Okla.

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See Powell Exhibit Space No. 4, Kansas Building, Tulsa Exposition, October 2-11

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BY SPECIFYING

POWELL VALVES

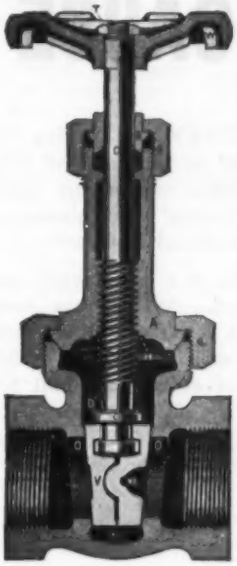

Fig. 375
WHITE STAR BRASS GATE VALVE
Steam working pressure up to 200 lbs. Extra Heavy for pressure up to 300 lbs. Sizes ¼" to 3".

ROBT. D. ALLEN
Pioneer Valve Salesman of the Southwest

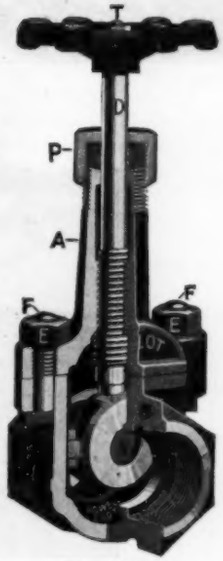

Fig. 460.
PILOT GATE VALVE
Steam working pressure up to 125 lbs. Iron Body or all Iron. Sizes ¼" to 3".

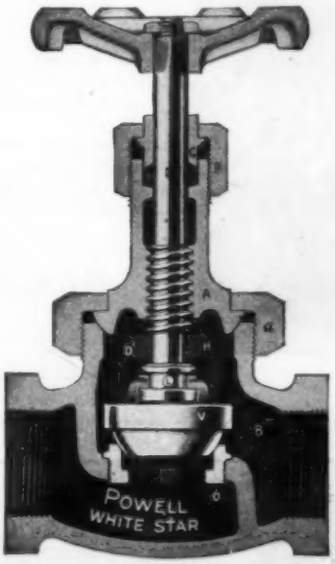

Fig. 102.
WHITE STAR BRASS GLOBE
Steam working pressure up to 200 lbs. Extra Heavy for 300 lbs.
Sizes ¼" to 3".

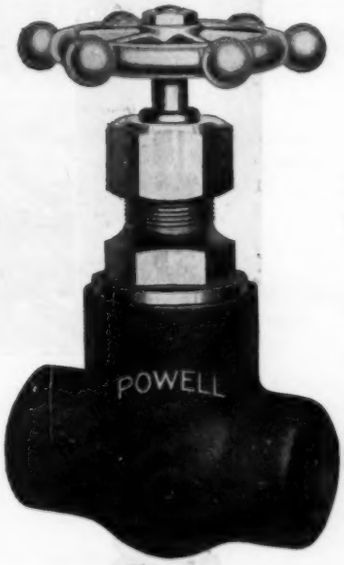

Fig. 3100.
DROP FORGED STEEL GLOBE VALVE
Recommended for high temperatures, and working pressure up to 800 lbs.
Sizes ¼" to 2".

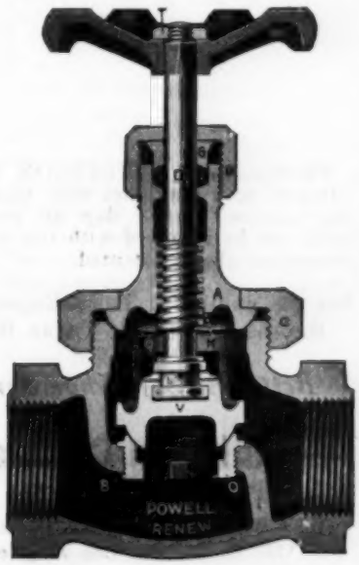

Fig. 190.
IRENEW GLOBE VALVE
Iron Body, Brass Mounted Steam working pressure up to 150 lbs. Extra Heavy for steam working pressure up to 250 lbs. Sizes ¼" to 3".

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DEPENDABLE ENGINEERING SPECIALTIES

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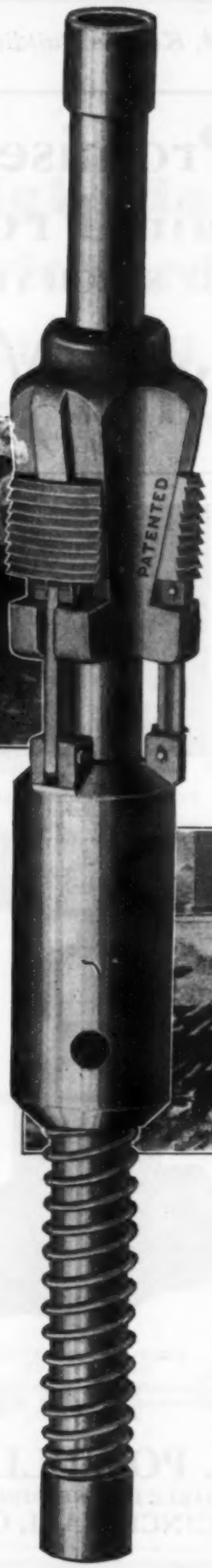
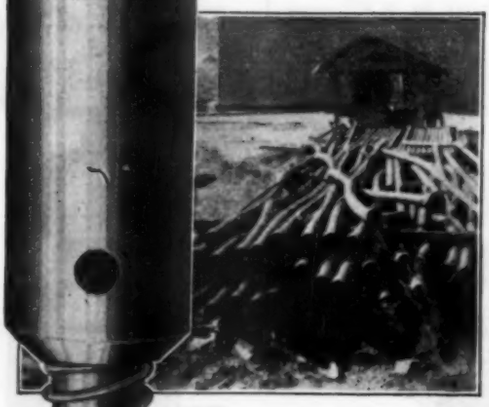
Say you saw it in The Oil Weekly

CONSECRATED TO A GREAT CAUSE



The GUIBERSON Tubing Catcher is consecrated to the work of taking tubing accidents out of the category of "current events" and placing them in that of "medieval history."

That this is a great work can hardly be disputed. Wells have been abandoned as a result of corkscrewed strings of tubing which could not be fished out. Millions of dollars are still being lost annually on fishing, ruined pipe and rods, and lost production resulting from tubing accidents.



The number of GUIBERSON Tubing Catchers sold multiplies with each year that passes. Some day all pumping wells will be equipped with this positive protection. Fully patented.

See our exhibit at Tulsa Exposition, Booths 81, 82, 83, Texas Bldg.

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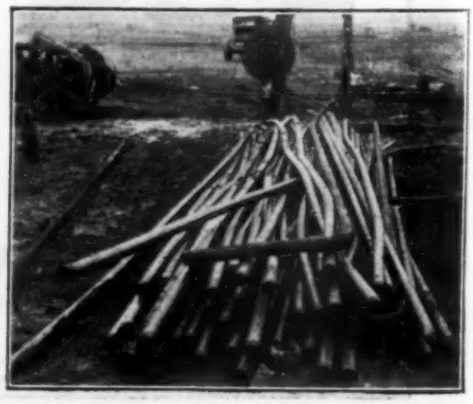

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*Printed in one or more issues each month.

WHERE the suction lift is relatively short, or the fluid gravitates to the pump to be discharged at some higher or more distant point, the proper pump to use is the so-called *discharge pump*. So-called because the greater part of the work comes on the discharge side.

On the other hand if the suction lift is either long or high in comparison with the discharge requirements, as is usually the case on suction lines, in drain pits, etc., this is the place for a *suction pump*. Because the work is more *suction* than *discharge*.

A *discharge pump* is much simpler to build than a suction pump. Once the fluid is introduced into the cylinders, it is forced out or discharged by the action of the pistons—it has no other course. However, to build a *suction pump* the cylinders of which will fill on each suction stroke, calls for the best in workmanship and design. The suction lift depends on the vacuum produced by the displacement of the piston on the suction stroke. If the fluid end is designed well and made accurately, the vacuum will be high—the principal characteristic of a true suction pump.

The 12x10x18" TRANSIT Duplex Separate Chest Type suction pump has been produced for over twenty years. In that time over 4000 of this one type have been manufactured and sold. It is furnished either cast iron or full brass fitted. Frequently it is ordered with a solid acid brass fluid end for handling weak sulphuric acid solutions.

We will be glad to furnish complete detailed description and prints to anyone interested in pumps. Address National Transit Pump & Machine Co., Oil City, Pa., or call up any of the District Offices in New York, Philadelphia, Pittsburgh, Cleveland, Tulsa, Houston and Denver.

OCT 11 1924

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THE OIL WEEKLY

An International Oil Publication for Oil and Gas producers

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R. L. DUDLEY, *President and Publisher*

SPENCER W. ROBINSON, *Editor*

Vol. 35 **FRIDAY, OCTOBER 10, 1924** **No. 3**

Oklahoma Decline Eases Crude Situation

Hoped for lifting of proration not yet in evidence, however; premiums in North Texas

FURTHER declines in crude oil production of the major pools in Oklahoma and no outward evidence of an increase in new work in the flush areas of the state may be taken as encouraging factors in the light oil situation in the Mid-Continent field. New field activity continues in Kansas with the more extended pay centering in Cowley and Montgomery Counties. Production in Kansas continues to show a slight increase.

There does not appear any indication at this time of the immediate lifting of proration by either the Prairie or Sinclair, although there were some observers who professed to see in the last reduction by the Prairie of an early return to a 100 per cent buying basis. The Prairie has been endeavoring to take care of all the production from the more settled pools in its buying territory, which includes the older fields. It is known that the company intends to continue this policy so long as their crude shipments hold to anywhere near its present level. Crude oil shipments of the Prairie to the refining areas north and east during September totaled 3,024,323.82 barrels. This is a decrease in total barrels shipped 328,926.92 barrels for the month as compared to August shipments.

With the exception of the Gilcrease Papoose pool in northern Hughes County, not a single field in Oklahoma showed an increase in production for the last week. This increase is negligible, however, amounting to less than 100 barrels a day. Activity in the Burbank field is slowing down and production from the deep sand in the Tonkawa field continues to decline. In Kansas the real centers of activity are in the Rainbow Bend and Coleman pools, the former in Cowley County and the latter in Montgomery County.

In the Rocky Mountain States operators are of the opinion that neither the Ohio Oil Company nor the Midwest Refining Company will follow the action of the Mid-Continent purchasers and further reduce price schedules on Wyoming and Montana grades. In that section with the coming on of the winter months, field work of necessity will decline and at this season of the year another reduction in Rocky Mountain grades appears unlikely. Field work in the new pools in Colorado also will be slowed down with the arrival of colder weather.

In the East the crude market does not show any noticeable improvement other than some of the pipe line companies still are on the lookout for crude on long time contracts. There still is considerable crude oil coming into the Atlantic seaboard refining territory by tankers.

North Texas Stronger

The return of premium payments for spot crude by several independent refiners during the past ten days affords substantial evidence that the crude market in the North and Central West Texas fields is developing a stronger tone, and the recent readjustment of crude price schedules by all the major companies, with reductions being given the lower grades of oil, has been discounted without having a bad effect on the trend of the market. Spot crude sales were made during the past week commanding premiums ranging from two and one-half to ten cents per barrel above the posted price, while less than three weeks ago spot crude was plentiful at prices considerably under those posted by five of the major companies. This rapid change in the crude market is not due to the steady de-

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The OIL WEEKLY wants only such subscribers as are engaged in the oil producing or pipe line business, or sub-branches of the producing and pipe line business. It has no desire for investor circulation, and it reserves the right and will exercise the right to reject subscriptions coming from persons whose interest in the oil industry is through the purchase of oil stock.

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cline in production of the major fields to any great extent, but is the result of The Texas Company, major buyer and carrier of crude in North Texas, offering to buy in all the pro-rated oil stored in its lines and giving pipe line connections to new wells not already served by other major pipe line concerns.

Since The Texas Company is showing a willingness to give new pipe line connections and purchase additional oil in the North Texas district fields when called upon, the independent producers show preference for such a connection unless an attractive bonus can be had for oil sold on the spot market. A number of refiners are dependent upon the spot market for their crude supply, and have been making purchases since the early part of the past summer without paying a bonus and even below the posted price during August, but now a premium is becoming necessary to obtain spot crude.

The reappearance of premiums indicates that the North Texas crude market is becoming stabilized, as the high gravity oil produced in this section of the state always carries a premium above the price posted by the major companies when market conditions are normal. However, this strengthening of the crude market does not make the producers immune from further reductions in crude prices, but is a local condition, and posted prices are governed by market conditions in the Mid-Continent district as a whole. In the event Oklahoma's flush fields cause another break in the Mid-Continent price structure, the price change would sweep across North Texas fields also, regardless of the strength of the market in the latter fields.

Individual Schedules

Both Humble and Magnolia are carrying out individual crude buying schedules in the North and Central West Texas fields, while all the other major companies are posting identical price schedules, with Prairie and Sinclair still pro-rating runs and limiting purchases. Humble is paying $1.35, or a bonus of 10 cents per barrel for 36 gravity and above crude in Eastland, Stephens and Young Counties, but on October 3 adopted Prairie's schedule for crudes in the Moran and Archer-Wichita districts. Magnolia readjusted its price schedule last Saturday, and is now paying 75 cents, or 15 cents less than other buyers, for crude testing 30 gravity or below. This reduction in price will be felt by Oklahoma operators, especially as Magnolia is a large buyer in low gravity fields in that state, but the cut will not affect North Texas operators. Magnolia is now paying 90 cents for 30 to 32.9 gravity oil, and retained its old price of $1.25 for 33 gravity and above, while five other major pipe line companies demand 36 gravity and above crude for the $1.25 price, making Magnolia's price a little high on one grade, and low on two others

Sell Big Lake Oil

The Big Lake oil field in Reagan County section of West Texas is beginning to attract foreign crude buyers, or rather buyers from distant fields and states. During the past week a deal was closed in New York City whereby the Marland Oil Company is to buy 50,000 barrels of crude from the Big Lake Oil Company at 90 cents per barrel f. o. b. tank cars in the field. This oil is to be shipped promptly to the Marland Company's water terminals at Texas City on the Gulf Coast. Other crude buyers are making overtures for crude from the above two producers in the Big Lake field, while in the meantime the Big Lake Oil Company is erecting six 55,000 barrel tanks and The Texon Company is making inquiries for four tanks of the same size. This tankage is to be used in handling the expected production from wells now getting underway.

California Market Soft

The California market on refined products is soft, and spotty. The demand for gasoline is slightly weaker, with prices on a par with those asked for the past three weeks. Domestic prices for gasoline are shaded to some extent in the case of foreign shipments by tanker, and this tanker movement continues so that the general situation is not bad from that standpoint. The bootleg situation continues bad. Some of the smaller refiners are making concessions to secure business. Filling stations are being offered differentials ranging from the regular three cents a gallon to 5 cents in a few instances. The prevailing price with the cut price filling stations is six gallons for a dollar, which cares for the two cent a gallon tax.

Natural gasoline is holding firm around 10 to 10½ cents a gallon. This demand is caused by the General Petroleum, Shell and others coming into the market for most of the production for sale. Should these companies suddenly decide to quit the market, the price would drop off in a hurry. The larger companies buy this natural gasoline to make up gasoline for foreign shipments.

Up to October 4 the crude market was holding firm with no indications that a cut was in immediate prospect. But there were rumors that some of the existing contracts calling for shipment of California crude to the east coast might be cancelled on the part of the east coast purchasers.

California Natural Gasoline Output Up

Los Angeles, Calif., Sept. 27.—During the month of August production of natural gasoline in California showed another increase, the total production for last month being 15,008,000 gallons against 14,913,000 gallons the previous month. During August, 12,883,475,000 cubic feet of gas was treated against 14,122,500,000 cubic feet of gas during July. This indicates that as the fields grow older the gas is becoming richer.

Approximately one-half of the production of natural gasoline is used in California refineries for blending purposes.

It is estimated that the natural gasoline manufactured each month in California has a value of close to $1,500,000.

S. A. (Tex) Hurd, field superintendent for the Spengler Core Drilling Company, headquarters Los Angeles, departed last week for Tulsa, to have charge of the exhibit his company has arranged for the Petroleum Exposition.

California Crude Movement To East Coast Shows Drop

Los Angeles, Calif., Oct. 4.—During the month of September a total of 2,890,990 barrels of California crude moved out of Los Angeles Harbor to Atlantic domestic points, or a daily average of only 96,366 barrels. To Atlantic foreign ports, shipments totaled 316,000 barrels of crude. Add this to Atlantic domestic movement, and the average shipment of crude through Canal was 106,900 barrels daily in September.

A total of 2,696,515 barrels of fuel oil moved out of Los Angeles Harbor last month to all points, while the total movement of gasoline was 790,282 barrels. Of total gasoline moving, 145,792 barrels went to Pacific domestic ports, 201,872 barrels to Pacific foreign points, 80,174 barrels to Atlantic domestic ports and 515,283 barrels to Atlantic foreign points, mostly England. A total of 188,921 barrels of kerosene moved, 186,492 barrels of which went to Pacific foreign ports.

There has been a steady decline of movement of crude from California to Atlantic domestic ports since the first of the year. During the first six months of this year, the movement was around 141,590 barrels daily average. The average during the next three months will be less than 100,000 barrels daily.

New Steel Prices Lower In Western Oil Country

Pittsburgh, Pa., Sept. 29.—Awaited announcements on prices on steel products for the oil industry have been made public by the United States Steel Corporation and subsidiaries and independent interests now are ready to formulate quotations that will be in line with the prevailing level. These prices will mean a saving to the consumer and it is believed will result in an appreciable increase in business at this time.

It now appears that one certain result of doing away with "Pittsburgh plus" will be the merging of several of the present steel companies, especially those in the Pittsburgh and Chicago territories and it is believed that the next year or two may witness important developments along this line.

The first U. S. Steel interest to announce new prices was the American Steel and Wire Company, which announced a new schedule on wire products. The company has withdrawn all previous quotations and will quote in the future on a delivered basis. Then followed the American Sheet and Tin Plate Company and then the National Tube Company. New prices of the American Sheet and Tin Plate will mean a saving to the western consumer of about $3.80 a ton on sheets. The new levels for the west are: Galvanized sheets, $4.75 f. o. b. Chicago; black sheets, $3.65 f. o. b. Chicago, and blue annealed sheets, $2.85 f. o. b. Chicago. Pittsburgh prices are $4.60 for galvanized, $3.50 for black, and $2.70 for blue annealed which levels are $3 a ton above the Pittsburgh base price. The company named Gary, Indiana, as a sales base in addition to Pittsburgh.

Oil Men Show Interest in Tulsa Exposition

Thousands show interest in equipment exhibits; pronounced success from every angle

By Grady Triplett

Tulsa, Okla., Oct. 6.—There is an old story that a policeman, given a day for leisure, will go out and take a walk over his beat.

It is true of the driller, as it is of the policeman. And that is the reason for the success of the International Petroleum Exposition.

In the weeks prior to October 2, the manufacturers of equipment for producing, refining and transporting oil and its products, set up something like $10,000,000 worth of apparatus on the site selected for the second exposition. Then in the 10 days between October 2 and October 11, the drillers came in by thousands, just to see more of their own work.

To class the attendance as drillers is using one word for men of various positions within the oil industry. The roughnecks, the tool dressers, the lease superintendents and the officials of oil concerns came to the exposition grounds time after time, always the attraction was the equipment.

Equipment is another word to include more classes of apparatus for the oil industry than ever was assembled before. From a microscope sufficiently powerful to reveal a grain of sand as a perfectly formed shell, to a rig sturdy enough to reach 7000 feet below the surface. The manufacturers did themselves proud by offering display that drew the oil producers hundreds of miles.

To be sure, the exposition had its glittering side. It began with a dazzling parade under a favorable Oklahoma sun. Each of the oil producing states had a princess, perched on a decorated float. There was a king and later in the proceedings a queen was selected from among the list of princesses.

But it was the equipment that drew the crowds. The pounding cable tools and the grinding rotary. Men long since given to obesity from years behind desks, found it to their liking to stand about the quivering derricks and watch expert crews handle the tools with such deftness that the ponderous pieces of steel seemed like straws. Men whose heads have come to know the Derby hat and who frequently appear in frock coats, gazed with approval and it seemed that they betrayed a desire to get a hand on the throttle or a foot on the brake.

A Business Proposition

To the credit of the management of the exposition, it should be stated that nothing was done to detract the attention of the driller or the company president from watching the wheels turn. There was no outlay of amusement concessions. While it may be unusual to visit an exposition and not find a Ferris wheel or a high diving act, the one just closed in Tulsa went through 10 successful days without anything of that nature.

Someone, knowing the weakness of every man for his work, as exemplified in the policeman taking his leisure by walking over his beat, set the International Petroleum Exposition and Congress up as an opportunity for the men of the oil industry to learn more about the industry, and the men of the industry, being human, just as the policeman is human, came along and took advantage of the opportunity. If any one missed the ballyhoo and the side show, no complaint of it reached headquarters of the Exposition.

The Exposition, however, was not without its lighter moments. Some of the moments extended into hours. For there was hilarity and much of it. Just as dancing has appropriate times, those attending the Exposition gave heed to the opportunity for pleasure and made the most of their opportunity.

But substantial business was transacted at the Second International Petroleum Exposition and Congress. Orders were given for equipment. The oil producer found it an excellent chance to buy a pump, jack or a set of jars. He could see either at first hand and find it at work. Furthermore, he could see perhaps a dozen types of pump jacks almost under one roof and he could make his selection after ample comparison.

No figures can be had on the amount of equipment sold during the exposition. But it was sold in fair quantities, so much of it that some men were surprised at the fact.

Some of the companies spent in excess of $25,000 to install and remove the equipment they had on display. So a few orders on the ground were well in order.

Crowds Visit Exhibits

Without the amusements common at expositions, the affair still had its touch of the holiday. Men and women, coming for miles, many of them by special trains, walked until their feet ached. The going was not rough but it was not the best place for low shoes, for the gravel had a mean way of crawling under one's heel and doing damage until pride went to the winds and the gravel was removed. Some days were warm but the nights were cool.

In Tulsa they rigged up most every contrivance with an engine and four wheels and put it to carrying passengers between the hotel district and the exposition grounds. And the drivers did their part toward making the 10 days a spell not soon to be forgotten by the traffic force. And right here may be a good opportunity to set it down that the city was free of high transportation fares during the exposition. Traffic regulations were so worked out that there was no delay in getting to and from the grounds.

Of course the hotels were full. For the time, Tulsa could have suported twice its hotel space. But a little matter of being crowded is nothing to men who have known the bunk house and who for the time at least, yearn for the lazy bench and the whine of the bull wheel.

The Congress

When sessions of the Congress began October 6, the meetings got down to fundamentals, for the problems of the petroleum industry were presented by men whose positions are at the pinnacle of the business. Benevolence had its inning with the meeting and election of officials of the Knights of the Derrick. This organization of men within the petroleum industry has plans for building a permanent home for oil field workers who become disabled while performing their duties.

John H. Markham, Jr., of Tulsa, was selected president. Vice presidents for the oil producing states were selected as follows: Frank Phillips of Bartlesville for Oklahoma; J. Edgar Pew of Dallas for Texas; A. L. Darby of Wichita, for Kansas; George N. Moore of Chicago, for Illinois; Frank Haskell of New York, for that state; F. L. Moore for Pennsylvania; S. A. Guiberson for California. A. V. Bourque was secretary of the meetings during the exposition. His report showed the organization free of obligations and with a surplus in its treasury.

Further plans of the Knights of the derrick will be worked out later.

When the gates of the exposition have closed at midnight October 11, it will leave those who made it successful glad for two reasons. One is that the affair had been successful, and the other that it is over.

Should a third one surpass the second one as the second one surpassed the first, it will be a stupendous show next year. But that is a story for the future.

Magnolia Moving Tanks From Powell to Cromwell

Corsicana, Texas, October 6.—Surplus steel tankage held by the Magnolia Petroleum Company in the Corsicana-Powell field is being cut down and shipped to the Cromwell field in Oklahoma, where Magnolia is purchasing about 15,000 barrels of crude daily with about half of this amount going to a nearby tank farm. Tank crews are now at work cutting down several of the 55,000 barrel tanks purchased early this year by Magnolia from the Cobden Fuel Company along with their full contents of crude. This crude has since been transported to the Gulf Coast. It is not known how many tanks are to be removed from the Corsicana district by Magnolia, but it is understood that its Oklahoma needs will be taken care of in the future by cutting down these used tanks.

J. E. Elliott, president of the Elliott Core Drilling Company and other Elliott oil companies, left Los Angeles early last week for points in Colorado, Texas and Oklahoma, planning to attend the Petroleum Exposition in Tulsa and later visit points in Louisiana and probably Arkansas.

Flooding Increases Bradford Production

Believed that district will produce more in future than since discovery in 1868

By Grady Triplett
Staff Representative

Bradford, Penn., Sept. 29.—Although water incursion is some 25 years old in the Bradford-Allegany district, only 10 per cent of the 100,000 acres of oil producing area has been subjected to this method of stimulating well output. This 10 per cent is but an estimate. The actual area under flooding" may be even less.

That the injection of water under natural pressure is an effective agent for further draining a sand of the type in this district, is shown by the fact that the output of the whole field is on the incline because of the adoption of water over not more than 10 per cent of the area.

Where "flooding" has been attempted under systematic conditions, the increase in output has been pronounced. The accompanying graph of production in the Simpson district of McKean County is evidence of the effectiveness of "flooding" scientifically done. This property, with an annual output of 8000 barrels in 1912 gave up 30,000 barrels of oil in 1923. Had natural decline been permitted on this property, the 1923 output would have been slightly more than 5000 barrels.

Results from "flooding" are not uniform in the Bradford area. This is due to methods and perhaps to some extent to underground conditions. But the use of water has resulted in a mounting production in the Bradford sand in all instances, where new wells have been drilled for the water supply. The best results have come where new wells have been drilled for both water and oil, the existing oil wells being ignored in drilling but used in production.

Some properties, systematically "flooded" have given up 12,000 barrels an acre of oil. In other instances the yield has been as low as 2000 barrels an acre. Results in all instances are to some extent determined by methods and desires of lease operators.

Conversation with producers in the Bradford field leads to the conclusion that the use of water as a means of stimulating production from the Bradford sand is successful. With not more than 10 per cent of the area of the field under water, the field output is greater per well than it was in 1908. The curve is climbing each year, as 1924 will show higher yield than 1923. The well average for the Bradford-Allegany district is higher than the 10 gallon average for the whole state of Pennsylvania.

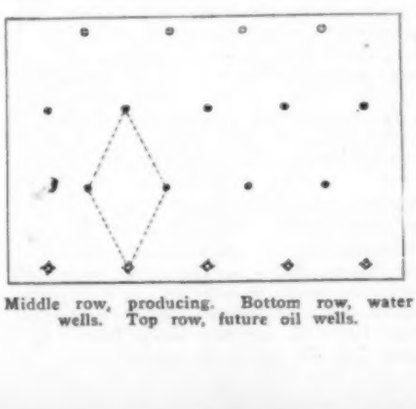
Results Vary

Pronounced instances of the success of "flooding" are the yields of more oil after injecting water than the property had given up during the whole history of natural production. Many men are of the opinion that the Bradford sand will produce more oil with the assistance of water than it did between the date of its discovery in 1868 and the first use of water in 1912.

As practiced in the Bradford-Allegany district water incursion is the cheapest method ever adopted for extracting oil held in formation, afters its gas pressure has been expended. It consists of drilling wells to the oil bearing formation, where water is discharged from some stratum above through tubing under natural pressure. It involves no surface equipment. The method of finishing the wells is one of small expense. Introduction of water can be controlled on the expense basis, as oil wells can then be drilled at the will of the lease owner.

Usually when a staff representative of an oil journal visits an oil producing section he is in search of information on "what." Mr. Triplett during the last few weeks has been making a tour of some of the older fields for our readers, during which he has been gathering some information on "how" and "why." The accompanying articles and others in this and other issues yet to come, which have been written following this investigation, should prove interesting to OIL WEEKLY readers not only from the standpoint of knowing what other people are doing with everyday tasks, but as possible source of suggestion on possible solution of problems which come up from time to time.

Like many other valuable discoveries, "flooding" came to be known through accident. Some old oil wells permitted water to escape and to reach the oil sand. While it stimulated oil production in these rare instances, it brought panic to producers. Many properties were sold at low figures for fear of complete loss from water. For lack of efforts to combat it, "flooding" proved itself. This took place over a long period and there are no records of it.



Middle row, producing. Bottom row, water wells. Top row, future oil wells.

But men, who sold at ridiculous figures have since seen their old properties come back to values of $1000 an acre.

Now Legalized

Even after the value of water incursion had been established, its adoption was slow, as it was illegal. As it has since been made legal by Pennsylvania statute, it may be safe to say that it was practiced prior to the passing of the bill. It came into systematic use in 1908. By 1912 its use was becoming general. Although not more than 10 per cent of the area was subject to water, the instances are sufficiently scattered to prove its value over the whole field in both Pennsylvania and in New York.

Recent cores of the Bradford sand show it to be a hard sandstone, brown in color and overlain with a lighter lime. Sections of the core from the odor leave no doubt of the presence of petroleum. These cores reveal a formation that will hold its shape regardless of the amount of oil taken from it. Its composition is such that sand is never pumped from a whole. "Floating sand" or "well sanded up" are terms not known to the Bradford area.

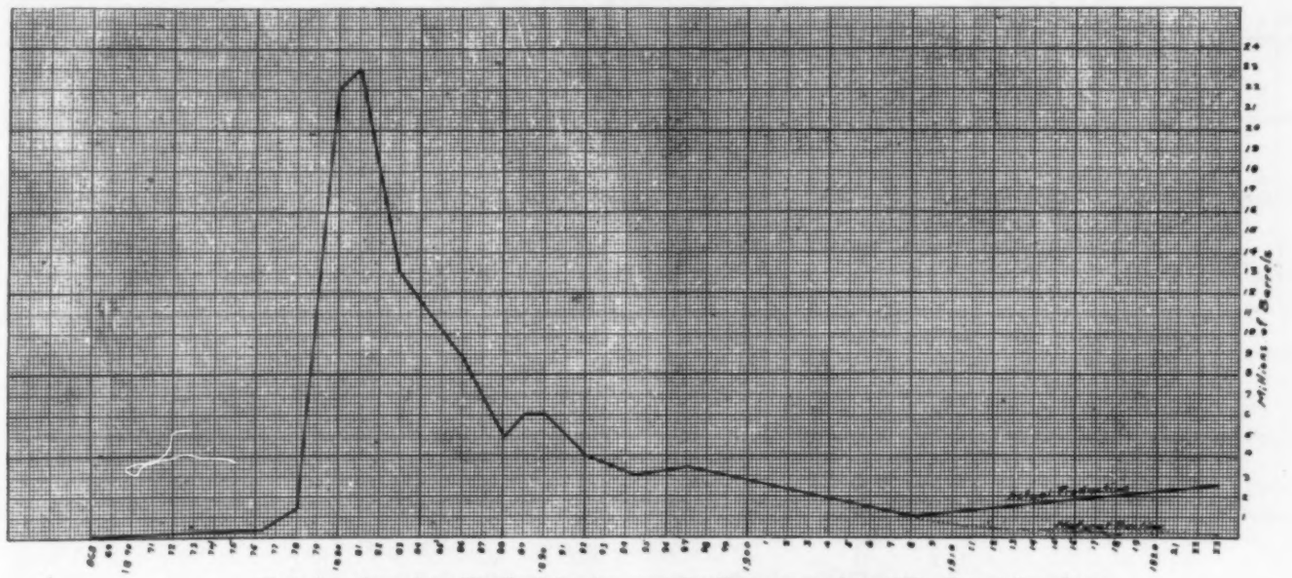
The type of sand may have considerable to do with the success of water incursion. Formations overlaying this sandstone are such that hundreds of wells are completed with one string of casing, set below the last surface water formation.

In drilling a water well the practice is to drill as for oil. But instead of casing off the water sands, they are left to drain into the hole, through a 2-inch tubing, extending from the level of the water sand to the top of the oil bearing formation. When thus completed, the task of providing water is finished.

Best results are obtained by determining first the direction which the water will travel fastest and then drilling water wells to take advantage of this condition. That this can be determined is explained by the accompanying article by L. S. Panyity, petroleum engineer of Bradford, who is a close student of the water method.

Effective practice is to drill water wells, spaced 200 feet across a property. Ahead of these oil wells are drilled, also spaced 200 feet, but located so each will be the top or a triangle, whose other points are water wells. When other oil wells are drilled, they are spaced 200 feet but so located that they form upper points of other triangles, with the nearest row of oil wells being other points of the triangles. This method of drilling is carried out across a property, which when drilled will be a network of diamonds, should lines be drawn to each four wells.

The one row of water wells is sufficient. As the water makes its way, it



Black line shows how "flooding" has increased Bradford output since 1908. Dotted line shows conditions that would have resulted from natural production methods.

may miss some oil wells but since they are located alternately, it will touch at others.

Wells Turned to Water

It has been found that the first row of oil wells, drilled by this system, will in time go to water. When this occurs, the practice is to convert these wells into water wells, also permitting the first water wells to continue draining into the oil formation. As this is continued additional water wells are provided by converting oil wells, until the amount of water is increased several times over.

Oil wells converted into water wells are not as effective as are wells drilled for the purpose. This is thought to be the result of holes being coated with parrafin from a long period of oil production. Whatever the cause, the wells drilled to permit the entrance of water are the most effective.

Some producers have tried to get the benefit of water incursion without drilling new wells. They have selected a well, removed the casing and set tubing to permit the water to drain into the sand. These efforts have not been successful in all instances and in no instance have they brought returns equal to the method of drilling new wells. These methods do not take into account the direction water will travel fastest. Then the possibility of the oil sand being filled with parrafin is a handicap.

One question sure to arise from any consideration of "flooding" is—how fast does the water travel underground?

It has no fixed rate in the Bradford sand. Where it has been introduced in an old oil well, the rate of travel has been so slow it was almost worthless. Where new wells have been provided with ample water flow, as much as 300 feet of travel has been recorded in a year. Excellent results are obtained if the water travels 200 feet in a year.

The common method at Bradford is to permit the water to enter the oil sand under its own weight. Recently pressure has been applied to the water column in water wells. So far no favorable results have been reported.

This all leads to the factor that makes water effective in forcing oil from the porous rock. It is held there by capillary attraction, just as kerosene will travel upward in a lamp wick and keep it saturated.

One theory is that the weight of the column of water forces the oil out of the sand. But it does not seem reasonable that a two-inch column of water would exert weight to any considerable distance from where it entered the oil sand. The value of this theory may be determined by the efforts to force the water into the sand by pressure.

Another theory advanced by L. S. Panyity is:

"There is a peculiar phenomenon due to surface tension by virtue of which water will displace oil held in captivity in a small or capillary opening. The power of this force, if measured in dynes, appears to be three times as great for water as it is for oil. The replacement of the oil from the pore space by such a means does not necessitate the use of any pressure of a column of water. It will take place without the assistance of pressure and in any direction, regardless of gravity."

The "Flooding" of Oil Sands at Bradford

By L. S. Panyity

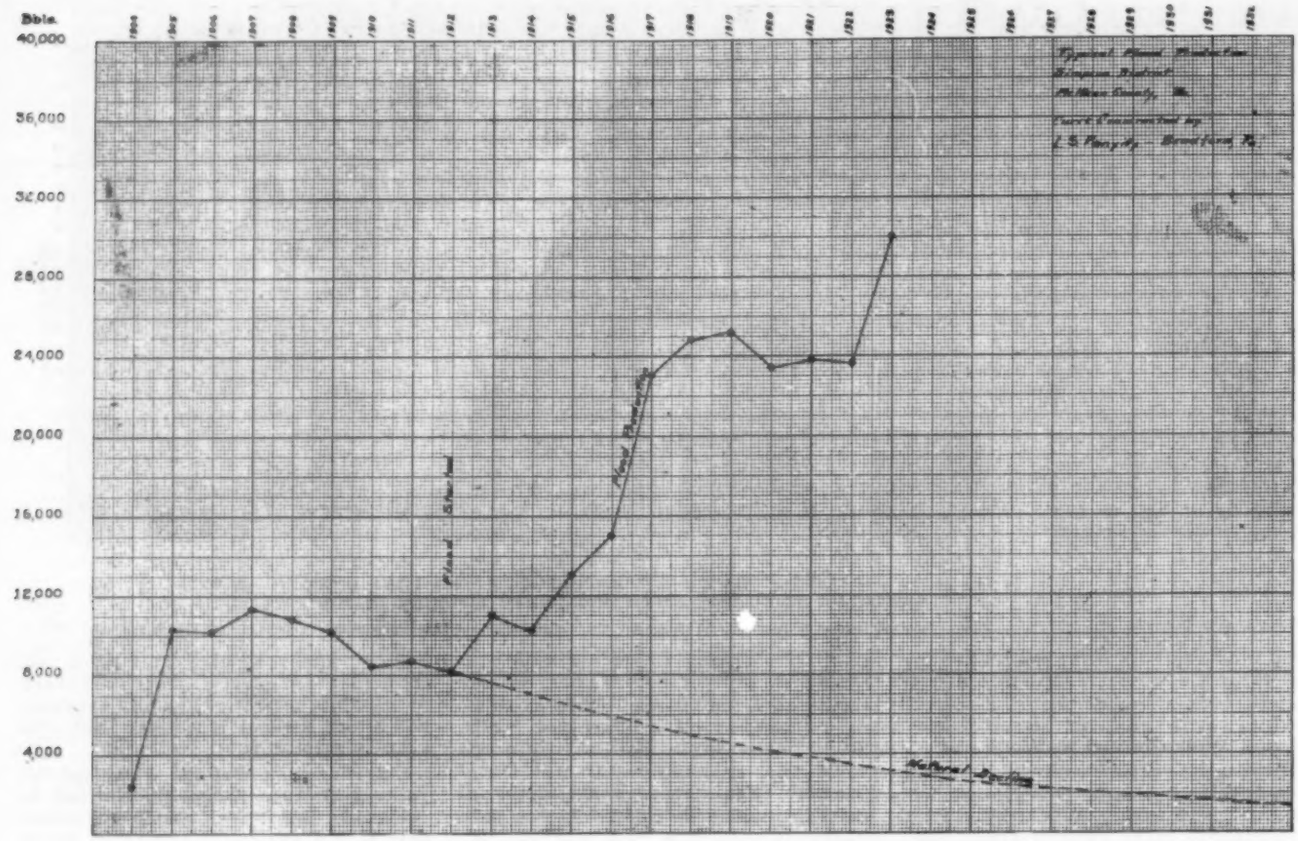
It is well known that once the gas pressure has declined in an oil pool or an oil well, oil will no longer find its way to the bore-hole but will remain in the pores of the sand. Various authorities indicate that only about 15 or 20 per cent of the total oil in a sand is recovered by natural production methods. In other words, as long as the gas pressure is present the oil will be obtained, when the gas pressure is gone the oil is no longer recoverable. There have been several methods employed throughout the country to supply the necessary motive force in such cases. They are the vacuum, air and water-flood.

It is the water-flood that is being used in Bradford which consists in allowing water to enter the sand through a well. This water forces the oil remaining in the sand towards the other holes, thereby increasing the amount of oil that would be obtained by natural production methods.

The first note of this method dates back to about 1890 but its general use is much more recent. A great many people were prejudiced against its use but its actual results have shown that it has been the "life-saver" of the field. The natural production in 1908 was about 1,000,000 barrels for the Pennsylvania area of the Bradford-Allegany pool. From that date the production instead of declining has been increasing until in 1923 2,500,000 barrels was obtained due to the increased recovery from flooding the sand with water.

Taking Cores

The operators in the field are very energetic in their problems and at present are taking a number of core samples of the sand in order to study and possibly improve the present meth-



Typical flood production, Simpson District, McKean County, Pennsylvania.

ods of flooding. The first core that was taken at Custer City has received considerable attention. This was a concerted effort on the part of all the producers, each standing his share of the expense. Since then individual operators take core samples to study the effect on production.

The main purpose of the cores has been to determine what percentage of the oil still remains unrecovered after natural production has ceased. The cores show that a great amount is thus still left in the sands. The United States Geological Survey is at present studying these core samples for porosity and saturation with hopes that it may lead to something of value. There are other advocates of studies along similar lines which although well meant can bring but very little results such as expected by the oil producer from these studies.

We are not concerned with the exact amount of oil still left in the ground. It is sufficient for us to know that all of it is not recovered. What we want to know is how to get more of it out and studies of porosity and saturation can be of little assistance.

There are two main elements in successful flooding, first, the direction in which the flow of the water is the fastest; second, the distance around each well that each oil well drains; that is, the effective distance. For the first problem the present writer has a solution in the geological study of the individual lease, but the second is still unanswered and can be learned only by experimenting in the field by various locations at various distances.

Former writers on the area have stated that the Bradford sand lies flat and this erroneous conception existed for some time. The present writer has shown in the survey for the Internal Revenue Bureau that well defined anticlinal and synclinal structures control accumulations, and since the writer's resignation from the bureau it became possible to study the flooding situation more thoroughly, this study resulting in a discovery of a method by which the direction of the fastest flow of the water in the sand may be determined. Originally the impression was that the water which enters the sand will spread out in a circle but it has been found that none of them actually ever did that and that the shape of the watered out area is generally an elongated oval, and that the direction of the short and long axes of this oval can be defined from the structural maps of a lease.

As to the effective distance, which is the second consideration, very little can be told. The main question is how far does a pumping oil well affect the oil from it. One can realize how it may drain an area between it and the water well but how much more on each side of it away from it or at right angles with the line from the water well does it drain? The present practice of the best producing companies is to drill a row of water wells about 200 feet apart across the lease after determining the direction of the water flow, then on each side of the water well line a row of oil wells are drilled so that the water wells and the oil wells form the points of a triangle 200 feet for the base from one water well to the other, then 150 feet for the sides.

This method was first used by the Forest Producing Company and thus far it appears to be the best method. The second row of oil wells are spaced ahead of the first row and so arranged that they again form a triangle, the purpose of which is to catch the oil which has passed by the first row of wells.

Other Possibilities

The flooding method has been tried at a few other places but it appears to be successful only at Bradford. It is the writer's belief that flooding can be applied elsewhere if the proper precautions are taken. It cannot be expected that water travels the same in an open formation as it does in a very close, tight sand such as the Bradford sand. Where the sand is very open or porous, it is imperative that flooding be started in a small closed low or synclinal structure, and this applies in all such cases. At Bradford where the sand is very tight and hard compared to the majority of the oil producing sands structural effect is entirely different and the effect of the dips in an open sand is not noticed in the closed sand. Water movement in a close sand is not dependent on the up or down dip of the formation but more on the rate of dip. By the proper application of the structure as it exists proper flooding may be undertaken.

Accurate figures are not available as to the increase of flooding methods

over natural production but a general knowledge of conditions that at the lowest minimum flooding will bring about at least as much oil out of an acre as has been obtained before flooding. And this approximation is very conservative. From this we may safely say that Bradford is about to produce as much oil as it has in the past. Judging by the present prevailing prices of acreage which appear to be unheard of in an old poor such as this, the value of flooding cannot be questioned.

It differs a great deal from ordinary oil producing in several ways. First, it is possible to make a close approximation as to the amount of oil available by flooding, second the time element is entirely at the discretion of the operator. By this we mean: Under general producing conditions an operator drills a well then pumps it until it stops producing, the time element is the natural life of the well.

This is not so in flooding. Of two operators who may have equal acreage of equal value, the one with more up to date standards and better knowledge of the present worth of a dollar will so arrange his flooding program that he will obtain his oil in say 15 years, while the other will take two or three times as long to deplete his property.

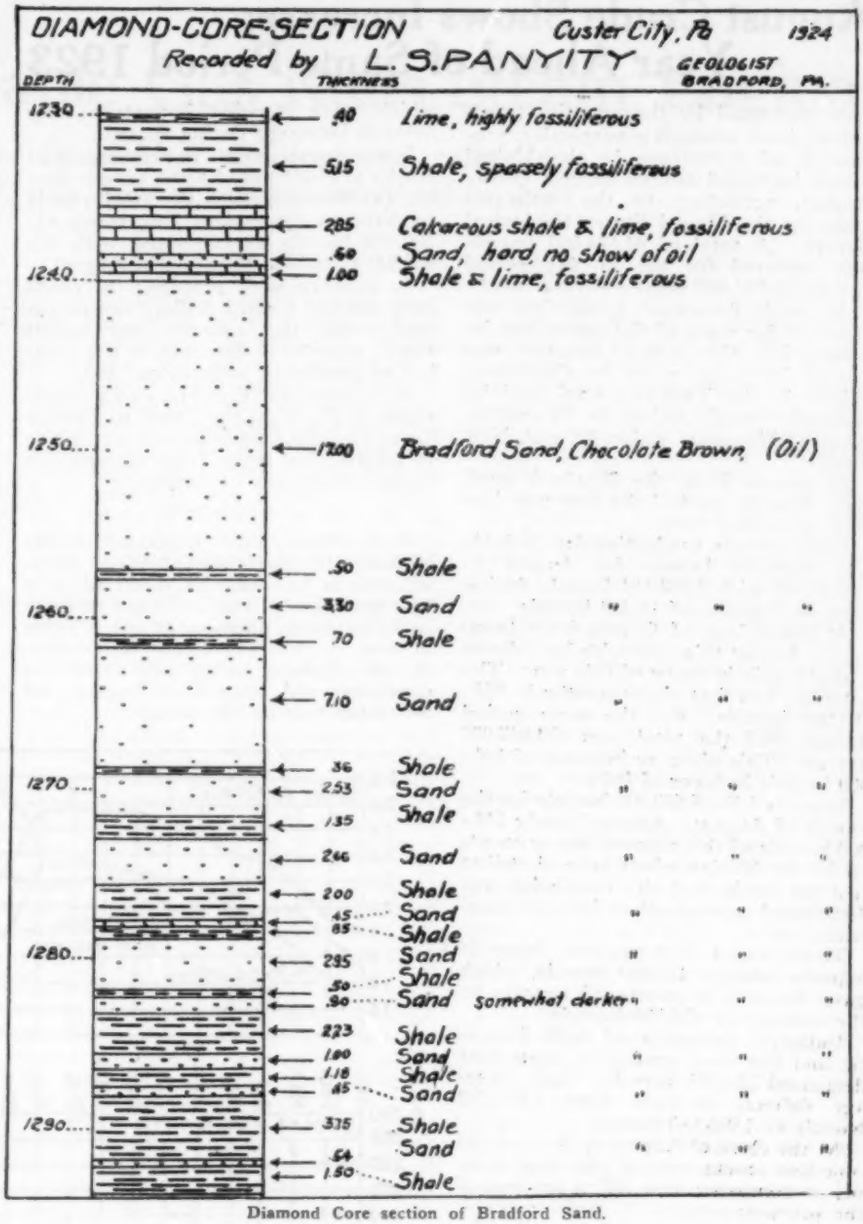
Third, we come to another point which may be a corrollary to the other two, and that is the element of chance. The hazard of the oil producer is reduced to the minimum in flooding. The reason for this is that flooding works only in such fields as have been producers previously, so that it is known that the oil is still there and the original wells are regarded by the operators as the drill holes of the metal miner, they have proved the area, showed where the oil was. They know that they got oil by natural methods; it only awaits flooding to get some more.

Practical Study Needed

It is very doubtful to the writer after seeing the various cores taken by the different interests in the field that all the oil can possibly be obtained. So the greatest possible improvement in view is the study of the proper distance between locations, rather than laboratory studies of porosity. Studies of porosity and saturation are well and good, but even under the best conditions, as obtained by government experts, the figures given are but close approximation, and as the porosity in a rock cannot possibly change in a well defined manner but rather irregularly, as seen from samples of core, the main efforts of the operators should be turned towards studies of practical nature. Laboratory studies are not discouraged by the writer but their actual value when it comes to dollars and cents is not great enough, and the majority of the oil producers are expecting to learn more from them than the reports will show.

To the writer these scientific studies are of great interest. He has tried to show at various times that capillary action rather than the pressure of the column of water in the hole is the main cause of increased oil recovery, but the oil operator is more interested in the effect than the cause.

It is true that oil might have been formed from organic matter or from



Diamond Core section of Bradford Sand.

inorganic matter, a subject that has not yet been decided. The oil man, however, is satisfied to know that it has been formed and can be found rather than how it has been formed. And this is our reason for urging the oil men to give great amount of study to their actual producing methods in the field rather than await the answer that the laboratory test of the core will give, because no matter what the answer is going to be it will not be what the oil men want to know. They want to know how much oil is still under the ground, how to space their wells and how to get the oil out. The answer, however, will give them an approximate idea of the oil under the ground, but it will not be the recoverable amount that they will get but the theoretical amount, most of which will not be recovered. Neither will it give a clue as to the distance wells should be placed nor will it suggest any other method that would get more of the oil out. The writer believes that certain amount of improvements can be and will be made, but even then a great amount of the oil will still remain unrecovered.

Just a word regarding some well meant suggestions that have been made in Bradford regarding the possibility of mining the sand similarly to the methods employed in France, and a great number of producers see it as a possibility in the near future. The writer believes that any venture of this kind must be in the great future or not at all. The sand of Bradford and the sand at Pechelbron are two different things. The cost of labor in France and in the United States are also two different propositions. As a matter of fact this difference in the cost of labor has been well shown in the oil shale industry as it became possible in Scotland to mine oil shale profitably mainly due to the cost of labor being much lower than in the United States, where shale mining is not on a profitable basis. At any rate it will be advisable in the first place to thoroughly study the conditions at the French oil mines, their methods and geology, and secondly, there are a number of high grade oil

August Crude Shows Increase; Year Ahead of Same Period 1923

As measured by the quantity transported from producing properties, production of petroleum in the United States increased 601,000 barrels during August, according to the estimates made by the United States Geological Survey. A total of 61,684,000 barrels was reported for the 31 day period against 61,083,000 barrels during July.

Although decreased production was reported for most of the states, the increase for the entire country was caused by large gains in Oklahoma, chiefly in the Tonkawa pool, and by relatively small gains in Wyoming, Kansas, Montana, Colorado and New York.

Shipments from the Hogback pool, New Mexico, marked the first pipe-line runs from that state.

Daily average production for all fields was 1,989,806 barrels for August as compared with 1,970,418 barrels during July, an increase of 19,388 barrels.

A comparison of figures from January to August this year with last, shows a slight gain in favor of this year. The total for the first eight months is 474,783,000 barrels. For the same period during 1923 the total was 474,649,000 barrels. This gives an increase of 134,000 barrels in favor of 1924.

Imports fell off 640,000 barrels for the month of August. Approximately 516,000 barrels of this amount was accounted for by Mexico where several strikes tied up work, and the remainder was distributed among other foreign countries.

There was a simultaneous slump in exports totaling 166,000 barrels, which gave imports in excess of exports to the amount of 474,000 barrels.

Indicated deliveries of both domestic and imported crudes to consumers decreased 284,000 barrels. Daily average delivery dropped from 1,972,742 barrels to 1,963,580 barrels.

At the close of August tank-farm and pipe-line stocks totaled 181 days' supply as compared with 177 at the end of the previous month. A day's supply is based on the average daily rate for the month of deliveries to domestic consumers and exporters.

This increase expressed in barrels reached a total of 5,433,000. The Mid-Continent area including Oklahoma, Kansas, and North-Central Texas was responsible for more than 4,000,000 barrels of the total increase. This was due, of course, to the Tonkawa and Cromwell pools in Oklahoma, both of which were showing important daily average increases during August.

Refineries succeeded in reducing their stocks of crude only 530,088 barrels during the 31-day period, the total supply on hand at the end of July being 40,500,019 barrels as compared with 39,969,931 barrels at the close of August.

In keeping with proration of crude runs and the limited drilling campaigns throughout the country, the report shows a material decrease in the number of producing wells completed.

Shipments of California crude through the Panama Canal to eastern ports dropped 331,000 barrels, according to information taken from declarations made by masters of vessels.

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producing sands in the United States at depths from 50 to 500 feet that should be tried before endeavoring to shaft for oil at from 1500 to 2000 feet.

A final word as to the relative merits of air pressure and water pressure methods. It is impossible to make any authoritative statements, both have several good points and a number of shortcomings. Air will work where water will not and vice versa. Air will short circuit and is much harder to control than water. The writer is of the opinion that water will produce better results in a fine grained hard close formation while air will accomplish better results in an open formation.

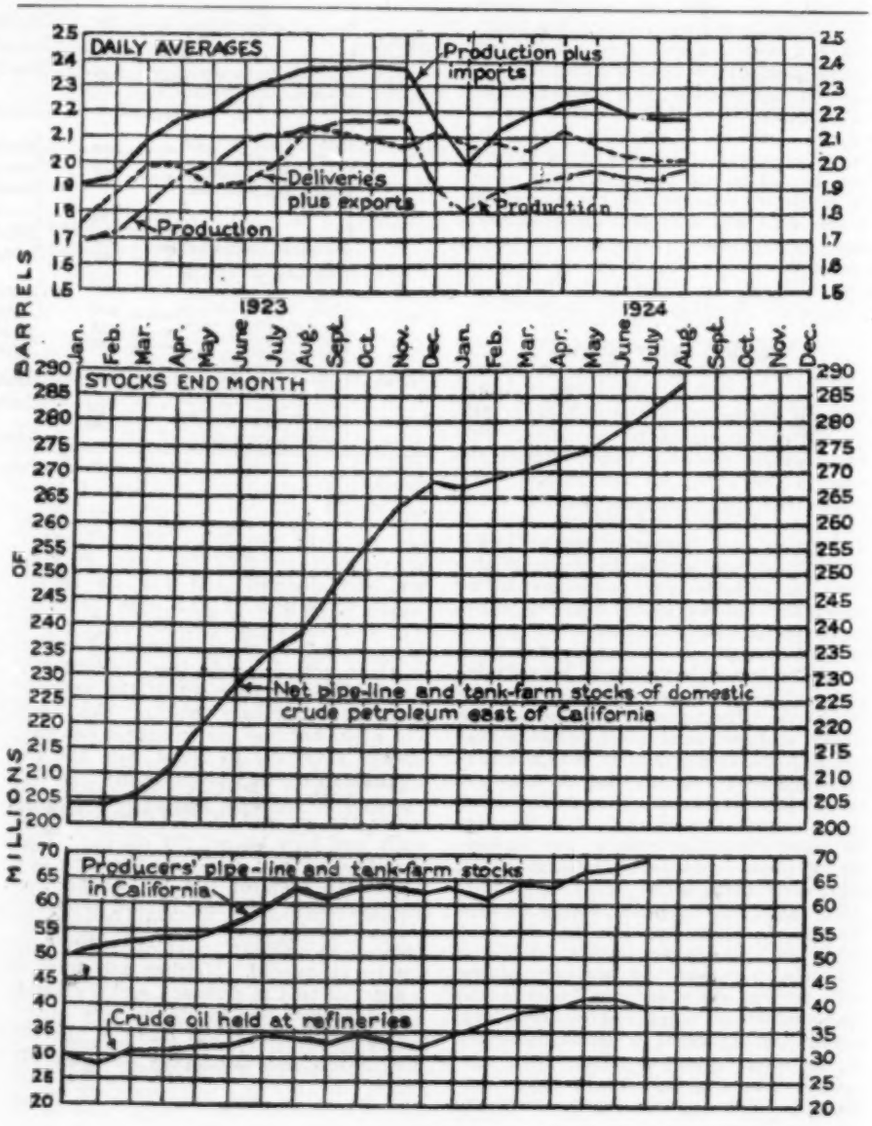
A. E. Raine, sales manager for the Wilson Oil Tools Corporation, headquarters at Los Angeles, departed early last week for points in Texas and the Mid-Continent, planning to reach Tulsa in time for the Petroleum Exposition. W. W. Wilson, vice-president of the company, will leave Los Angeles for the exposition on October 3.

CALIFORNIA FIELD OPERATIONS

The following table from statistics compiled by State Oil and Gas Supervisor R. D. Bush for California for the past several weeks gives a true insight into field activities:

Month of—	New Wells started	Water Shut-off tests	Deepening jobs	No. Wells aband.
June, 1923	120	195	59	22
July	94	145	46	23
*August	96	141	41	26
September	122	194	39	36
October	114	131	38	25
November	100	151	48	23
*December	105	181	37	32
January, 1924	120	111	48	23
February	125	97	49	47
*March	142	183	81	99
April	130	154	76	34
*May	156	171	79	34
June	118	149	66	18
July	112	129	69	28
Week ending—				
August 2	24	46	17	9
August 9	22	31	11	5
August 16	25	24	25	5
August 23	16	21	19	5
August 30	18	20	14	10
September 6	29	31	11	3
September 13	18	41	27	9
September 20	19	23	19	11
September 27	21	23	22	12

*Denotes months with five weeks.


DAILY AVERAGES
Production plus imports
Deliveries plus exports
Production
Production
BARRELS
1923
1924
Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.
STOCKS END MONTH
Net pipe-line and tank-farm stocks of domestic crude petroleum east of California
OF
MILLIONS
Producers' pipe-line and tank-farm stocks in California
Crude oil held at refineries

Non-Inflammable Gas Runs Steam Engine

Besides furnishing drilling and pumping power, gas flow is put to many other uses

By H. H. King

Non-inflammable gas coming from a shallow depth in two pumping oil wells, has been put to very practical use in Scurry County, in West Texas. The gas is controlled through braden-heads and supplies power without steam or ignition for the operation of all machinery on the lease. It also is used to run the drilling engine on a near-by wildcat.

The gas also serves as somewhat of a "Handy Andy" for the field men in cleaning machinery and bunk houses; inflating automobile tires, leveling sand dunes piled high on the leases by the winds, and numerous other uses ranging from the freezing of ice cream to keeping water melons cold in the summer time. Despite this widespread use, the flow of gas from the two wells has not been diminished to any noticeable extent, and the pressure is being maintained above the level required for deep drilling.

Although the direct use of high pressure gas for power drilling is not an unusual occurrence in some of the older oil fields, it is seldom that a non-inflammable gas is available, thereby eliminating the fire and explosion hazard, and it is this safety feature that permits the numerous usages of the Scurry County gas. The practicability of making use of this peculiar gas for power has been proven by the drilling of 6615 feet of hole in three tests, with the cable tools making a maximum footage of 140 feet in a 24-hour period.

Discovery Blows Wild

Prior to the development of non-inflammable gas flammable gas production in Scurry County in May, 1923, a wildcat test drilled by the Mitchell County Oil Corporation on the W. H. Badgett ranch in the upper part of Mitchell County discovered the gas in the early part of 1923 at 1070 feet and developed a flow estimated at 50 million cubic feet daily with a heavy flow of unusually briny water. The drilling crew lost control of the well, and after flowing wild for a period the derrick caved in under the strain or the battering received from the gas, water and rocks along with the weight of salt that accumulated on the derrick timbers. It continued to flow at a reduced rate for months before bridging over, and the entire rig was destroyed by the tons of salt that was piled several feet high for hundreds of yards around the location.

While the Badgett well was staging its spectacular performance, The Loutex Corporation (now Northwest Company) started a wildcat test about six miles north and across the county line in Scurry County. This test was drilled on the J. J. Moore ranch, near Ira, and uncovered the same gas production in hard gray lime at 1296 feet, with an initial flow estimated at 15 million cubic feet. Drilling was continued, and a sandy shale at 1765-1850 feet tested good for about 15 barrels of oil daily, but was passed up to try for a more prolific oil pay. A string of 10-inch casing had been set at 1131 feet, as a precautionary step against a gas blow out, and at 2140 feet 8¼ inch casing was set with a braden-head installed to divert the flow of non-inflammable gas production, which continued to hold up in volume. It was at this point that the owners of the well decided to try using the non-inflammable gas coming from the braden-head for power instead of steam for drilling, as fuel oil was costly and boiler water somewhat scarce.

Piped to Boiler

Walter W. Lechner, superintendent in charge of drilling on the Moore well, was called on to put the novel feat into effect, and proceeded to pipe the gas from the braden-head into the boiler through the feed line originally used for water. Before turning the gas into the boiler it was filled about half capacity with crude oil in order to arrest any foreign substances, such as sand, scale, bits of casing, etc., as might be carried by the gas and later pulled into the engine. The boiler and engine were the same used previously in drilling with steam. An equalizer and blow-off valve was then installed on the gas line between the well and boiler, so that when it was desired to shut down the boiler it was only necessary to open the valve, thereby permitting the gas to escape into the air.

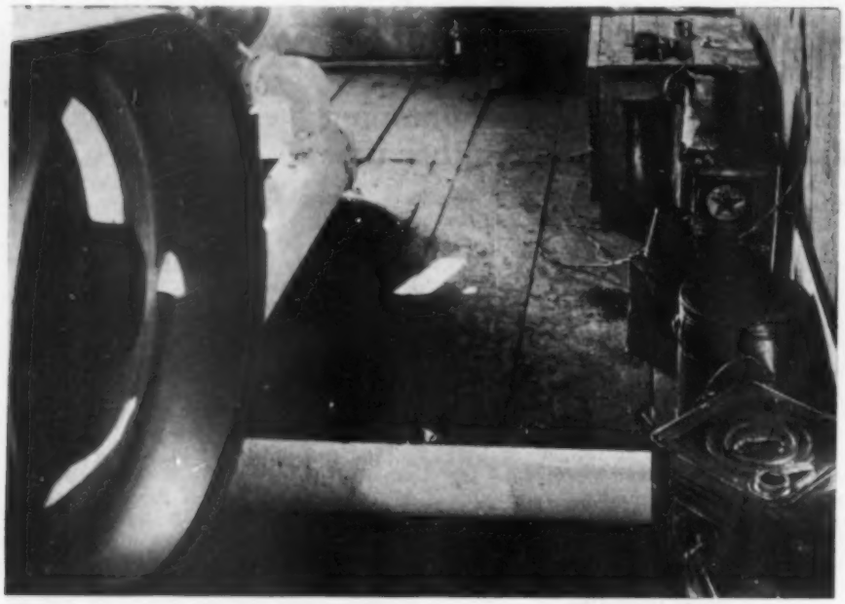
According to Lechner, it requires less than two minutes to get up 120 pounds of pressure, which was the usual amount carried when steam was being used in the same boiler, and in that brief length of time drilling can be started. The use of this non-inflammable gas for power did not require any change in the engine, but it was found that the ordinary lubricating oil would not do for the engine. Since the gas entered the engine under pressure and was compressed, low temperature developed to such an extent that the lubricating oil became gummy and retarded the action of the engine. This trouble was overcome, however, by using regular ice machine oil, which is adapted to low temperature.

The non-inflammable gas was first substituted for steam in the deepening of the Moore well on the morning of July 24, 1923, and the driller found that the gas handled the tools quicker than when steam was used, while it was impossible to pull the pressure under 80 pounds when pulling the tools out of the hole. This well was deepened from 2155 to 3575 feet with the gas taking the place of steam, and was completed in November as a small oil pumper from the upper pay after a shot, while the gas continued to furnish the power for pumping.

Second Well Cut In

A part of The Loutex Corporation's leasehold in Scurry County was acquired by I. B. Humphreys and associates (now Northwest Company) of Denver, and a test spudded in February, 1924, on the Wellborn land, located about one and one-half miles southwest of the Moore well. Fred Carey, drilling contractor of Colorado, Texas, took the contract to drill the Wellborn test, and a three-inch line was strung to pipe the non-inflammable gas from the Moore well to use for fuel. After spudding to 40 feet the Wellborn test was switched to gas for power, and later uncovered a two million cubic foot flow of non-inflammable gas while drilling with a 12-inch hole in white gravel at 1225 feet. A string of 10-inch casing was set at 1472 feet with a braden-head,

Crater and wrecked rig caused by blowout of non-inflammable gas in Mitchell County.



Frost covered exhaust pipes on drilling engine.

and this gas production was tied into the same line from the other gasser, thereby adding to the reserve power. The Wellborn test continued to use the gas for power in drilling, and in May, 1924, passed through oil pay at 3380-3420 feet into salt water at 3490 feet. It was plugged back and given a shot June 21, 1924, in the deep pay, resulting in a 40 barrel pumper. The gas was credited with having made 3385 feet of hole in this well, and is now furnishing the power for pumping.

The third and most recent test to be drilled, with this gas providing all the power requirements, was started last July by I. B. Humphreys and associates on a wildcat location on the C. P. Coleman ranch, section 68, Mitchell County, or about three and one-half miles south of the Wellborn well. The gas line serving the Coleman test is fed with gas from both the Wellborn and Moore completed wells, and at first the drilling contractor on the Coleman test was doubtful as to whether sufficient pressure was available to continue to pump both wells and drill the third test, as the gas from the Moore well, which is the main source of supply, had to be piped through five miles of three-inch line. All doubt was soon removed, as sufficient pressure was built up in the line within 24 hours, and a constant pressure of 160 pounds is now to be had at the Coleman test in Mitchell County. An equal pressure at each well on the gas line is maintained through the use of a series of gate and check valves.

The Coleman test is now fishing at 1965 feet for a lost bit, but through no fault of the gas power, and is credited with having made 1800 feet of this hole with the gas, while the balance was drilled with steam when the gas line was converted into a water and crude oil carrier.

Blows Oil in Pipe Line

When lease storage tanks around the Moore and Wellborn pumping wells were filled with crude several months ago arrangements were made to sell the storage oil and current production to the Rio Grande Oil Company, which has a pipe line gathering system in the Westbrook field, Mitchell County. In order to tie into the Westbrook system, a two-inch line was built by the Northwest Company from the Coleman drilling test a distance of three miles south to the Rio Grande Oil Company's nearest connection. This two-inch line is an extension to the three-inch gas line linking the Coleman test with the Wellborn and Moore producers, and is frequently converted into an oil carrier in making deliveries to the Rio Grande Company, while during that time the Coleman test switches over to the use of steam for power without any appreciable loss of time. The oil storage at the Moore well is blown by the air to the Wellborn tanks, then pumped via the three-two inch line to the Rio Grande Company with a 10x3½x10-inch pot valve type steam pump operated with air, using 120 pounds working pressure, while it is capable of building up a line pressure of 600 to 800 pounds.

According to an analysis made of this non-inflammable gas it contains about 92 per cent nitrogen, three per cent nethane, and about two per cent ethane, while the balance of the contents is thought to be helium. The gas is reported to have no more destructive effects on an engine than steam, and evidence is shown by the Ajax 12x12 engine on the Moore well giving almost continuous service with gas for power since July, 1923, with no repairs, except for one set of brasses, while the Acme 12x12 engine at the Wellborn well has been operated on gas since February, 1924, with practically no repairs.

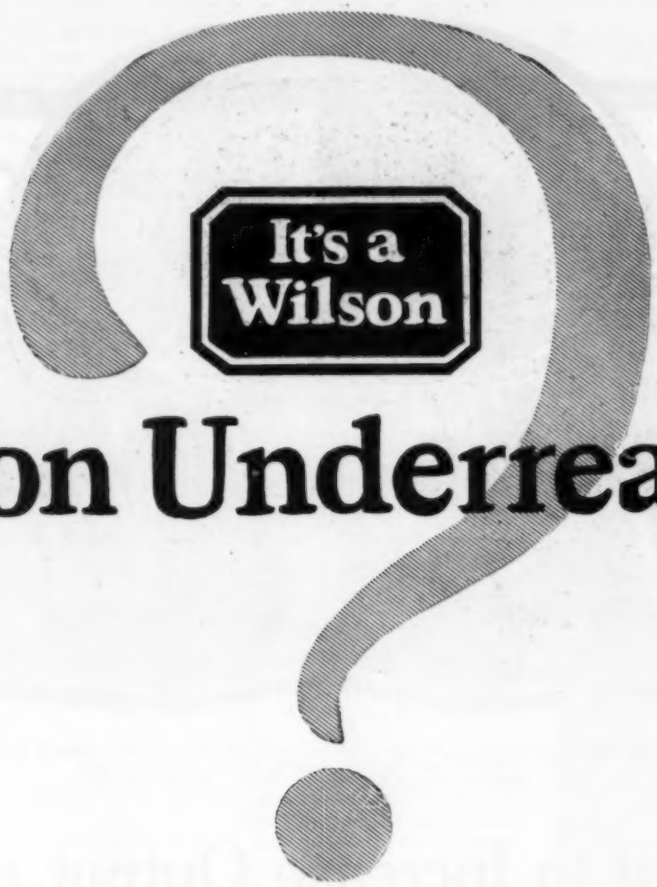
The popularity of the gas with the field workmen is becoming greater as new ideas are worked out to put it into use. It serves as power for operating turbine generators, thereby affording electric lights around the leases and bunk houses, and supplies the necessary air for inflating automobile tires. It has no equal in cleaning machinery, bunkhouses, carpets, etc., while mounds of sand piled up by the winds are often leveled with the gas. A heavy coating of frost that accumulates on the exhaust pipe of the engines as result of the expansion of the gas as its pressure is released, is often skimmed off by the cook and used instead of ice for freezing ice cream.

Correction Notice

In a recent article published in The OIL WEEKLY, concerning the Mexican strike situation, it was stated that the strike started with the Agwi Interests. The article further stated that the Agwi Company was unable to suffer the loss of even a temporary shutdown and was forced to meet the demands of the workers.

Both these statements were in error. The strike was started with the "El Aguila" Interests, and the Agwi Company does not report any unfavorable economic condition.

Drilling crew at Wellborn well using gas for power instead of steam, with Supt. W. W. Lechner standing at left.



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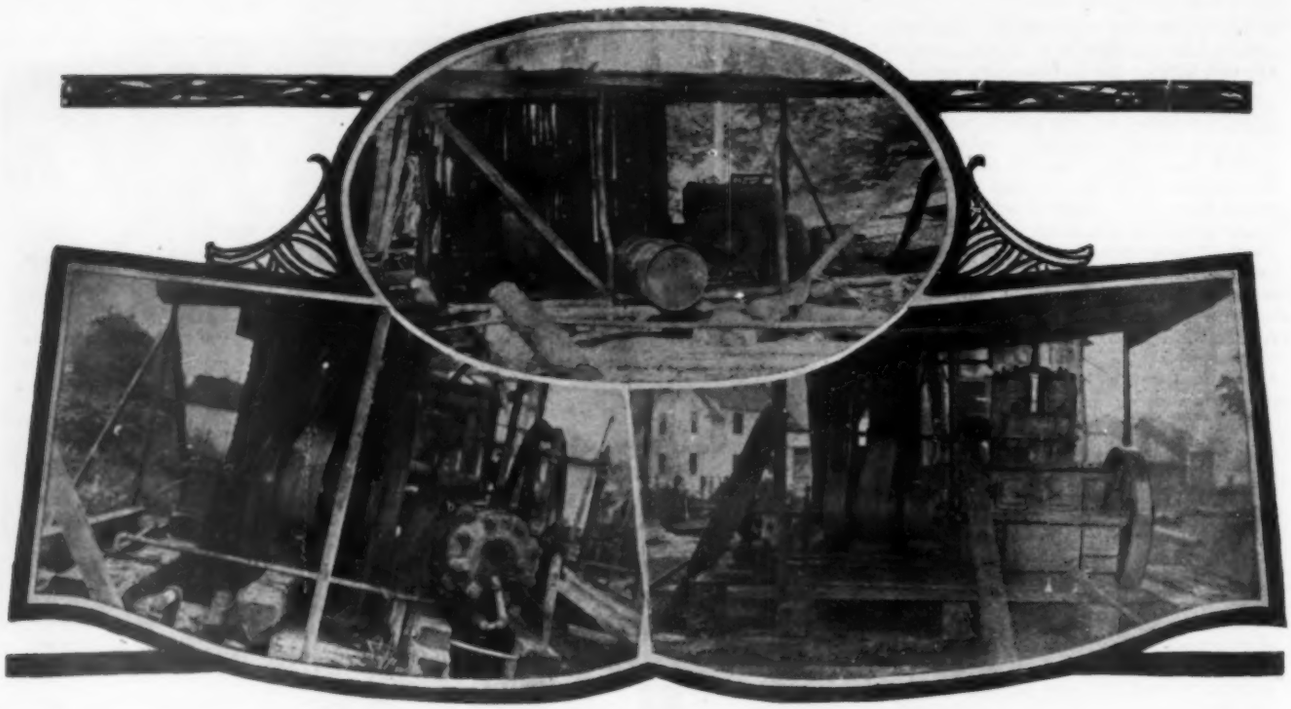


Left: One of the first Franklin Valveless Gas Engines set up for drilling around Bradford.
Center: Buffalo Gas Engine, located in the Bradford field.
Right: Another Buffalo Gas Engine, located in the same field.

Air Used to Increase Output of Wells

This method found to be most practical tried on small wells in Pennsylvania area

By Grady Triplett
Staff Representative

Titusville, Pa., Oct. 4.—Of the methods tried for enhancing the output of the oil fields around Titusville, the oldest producing oil wells in the United States, that of introducing air pressure into the oil-bearing formations has been the most satisfactory. There are perhaps a score of instances of its success in this part of Pennsylvania.

The method has some failures to its credit. These, however, have been found to have resulted from conditions of the oil-bearing formation, rather than to the general principle of introducing an artificial pressure to replace gas pressure. Some sands in this part of Pennsylvania will not respond to air pressure. They are the coarser formations, where the void spaces are extremely large, so large they do not permit the air to by-pass. It is the opinion that even the coarser sands would respond if air could be introduced at sufficient pressure.

The upper sand of the Titusville area is the more responsive to air pressure. In general the finer and more compact the sand, the more effective the introduction of artificial pressure. No data is available as to the effectiveness of air pressure. In one instance a property had its output increased 12 times over by the application of air. The average increase of well output after introducing air pressure seems to be about three times that of the output without external pressure.

The introduction of air under pressure is the reverse of the use of vacuum, although the object in each instance is identical. The common opinion of the purpose of either air pressure or vacuum to aid oil production is that it forces oil lying in void spaces to flow in the direction of the pits at the bottom of oil wells. The object of either agency, however, is to overcome capillary attraction.

When one corner of a lump of sugar is held in coffee, the coffee immediately travels over the whole lump of sugar. This is the most common evidence of capillary attraction. It is a force stronger than gravity, for it overcomes gravity.

The expression of oil "draining into a well" is common. But capillary attraction will not permit oil to drain. This force compels oil to seek the upper part of a sand. There it will remain until some other force overcomes capillary attraction. When wells are first drilled either gas or hydrostatic pressure will overcome capillary attraction, causing a well to flow.

After either of these forces has been exhausted, a well will not drain. The fields around Titusville have left sufficient gas to bring about one-eighth of a barrel daily into the holes. It is by the introduction of air that capillary attraction has been overcome and these wells brought to daily outputs of about three times the one-eighth of a barrel output.

Methods of introducing air differ. By drilling new wells or using old wells drilled many years ago, a property is provided with a series of pressure wells. The desirable condition is to have each oil well within 300 feet of a pressure well.

Preference of the pressure method over the vacuum method lies in the fact that vacuum is limited to its 14.7 pounds, while with pressure, the force is controlled by the condition of the sand and the equipment provided. Some leases around Titusville are under constant pressure of 300 pounds, while others are as low as 35 pounds. In rare instances pressures of 600 and 700 pounds have been found effective. These high pressures are exceptional.

The practice in these Pennsylvania fields is to determine the feasibility of air pressure by test before drilling wells and buying equipment. The Brundred Oil Corporation, perhaps the most extensive user of the air pressure method, takes a small engine and compressor to a lease and drills one well. Then the compressor is set up and the engine started. Over a period of weeks the action of surrounding oil wells is studied. Various pressures are exerted during this test period to determine which is the more effective. Often it may be found that air is not effective.

But where the method proves itself economical, equipment is bought to provide the pressure required.

First the wells are selected or drilled for introduction of the air. As a rule

they are cased to the top of the oil bearing sand. Some have casing only below the last porous formation above the oil sand. The proper method of finishing a pressure well is to so equip it that all air introduced into the hole will enter the oil-bearing formation.

Equipment Needed

Ordinary line pipe is used from these wells to the compressor station. Where the high pressures are necessary, special fittings are required. Some welded lines are used for this pressure. For the ordinary installations, requiring pressure of less than 100 pounds, the tubular equipment requires nothing of extraordinary nature. The lines are buried for protection. Valves are installed at the wells, so some can be shut off to allow introducing excessive pressure for specific purposes.

Usually the engine and compressor are housed in the center of a lease, although this is not necessary. Where the engine is to use gas from the lease for fuel, a type with an adjustable valve is preferable, as the gas on the lease under pressure becomes treated to such an extent that the engine requires frequent change of its fuel adjustments.

In a few instances the lease gas has become so diluted with air that it has been found impracticable to use it for fuel. Gas in these instances is bought from adjoining properties.

Introduction of the air pressure method also eliminates the making of natural gasoline from the lease gas, as its areation leaves the gas of poor quality for gasoline purposes.

Most plants are equipped with two engines and compressor, one to be held in relief, should the other demand shutdown. But there are small leases where one engine and compressor provide sufficient equipment. The engine and compressor are kept running as much as it is possible.

Contrary to expectations, shutdown does not mean the loss of all pressure built up from a long run. Instances are frequent where the equipment has been idle a week and very little of the artificial pressure lost. This condition is the more remarkable because of the fact that it often requires from three to five months to get results after first installing air pressure equipment.

Operation Economical

The practice in the Titusville territory is to operate air equipment without extra labor cost. The employes necessary to the production of oil on a lease are given the duty of looking after the compressor stations. Due to this practice, the cost of providing air pressure for a lease is trivial, once the equipment has been provided.

As the increased yield from air pressure can be fairly well calculated through a test, the economy of adding such equipment can be calculated to an accurate point.

The use of this artificial pressure is not a common practice in the Titusville area of Pennsylvania. One reason for this is that it forbids maintaining the small natural gasoline plants so numerous in this part of the state. Then the holdings of the independent operators are small. Eighty per cent of Pennsylvania producers and royalty owners have daily output of one barrel or less of oil. Since the installation of an air unit could not be expected to raise this figure above three barrels daily, the impracticability of buying the equipment is evident.

So far the installation of community-owned and operated air plants has not been adopted.

One factor in favor of air pressure over vacuum for overcoming capillary attraction is its effect on oil wells. Where wells have open hole, vacuum has a tendency to promote caving. Pressure has a tendency to prevent caving.

Air pressure, however, has this drawback. The introduction of air has a chemical effect on pumping equipment that has not yet been solved. It is such that steel pumping equipment is not feasible for leases under air pressure. Brass working barrels are in common use where leases are under air pressure.

Where sand conditions are favorable, introduction of air pressure has been found profitable in the fields around Titusville. The wells are less than 1,000 feet in depth.

Oil Source Explained Without Geological Aid

One of the laws of oil collection underground is—once a sand is depleted it can never again yield oil.

It must be a sound law, for it has an exception. Within the city of Olean, New York, home owners dig wells less than 20 feet and pump oil from a gravel formation. They deplete the supply. But a week, a month or a year later, they go back to their pitcher hand pumps and get more oil. They keep repeating that over and over and it is a profitable repetition.

There is trickery in it of course. The oil comes from the tanks of a refinery nearby. When the tanks are leaking, there is oil in the gravel below. So the operation of the hand pumps in the back yard oil pools is dependent on the solidity of the tanks at the refinery.

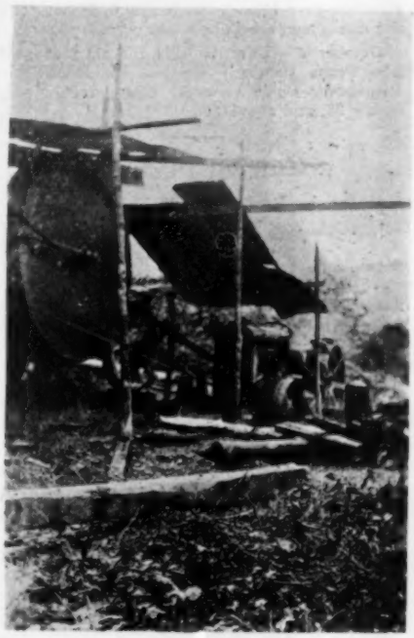
Often high grade lubricating oil is pumped from the gravel and sold at high prices. Some "producers" save the oil for their flivvers. The refining concern may get some of it back through purchase. It is not on record, however, that any man ever has recovered the oil and returned it to the concern, which lost it through leakage.

Tractors Popular For Drilling in Pennsylvania

Around Titusville, where the wells are seldom 1000 feet deep and portable machines are used for drilling, the Fordson tractor is gaining favor for drilling wells.

With the steam engine removed, when it is part of the equipment, the practice is to extend the shaft from which the band wheel is driven. This extension is then provided with a pulley, extending beyond the machine.

Then the Fordson is anchored beside the machine and drives the portable machine with a belt from its pulley to the pulley provided on the extended shaft.



Fordson driving Star machine near Titusville.

A wire control from the tractor accelerator to the drilling standard gives the crew the means of fixing the speed of the motor.

Pumping oil by hand in a back yard at Olean, New York

CRUDE OIL PRICE QUOTATIONS FOR ALL FIELDS

Changes

October 2.—Effective this morning at 7:00 Joseph Seep Purchasing Agency posted a 25-cent reduction in the price of Corning crude.

October 4.—Effective this morning at 7:00, the Magnolia Petroleum Company announced a change in its gravity postings of Mid-Continent crude. The new posting is as follows: Below 30 gravity, 75 cents; 30 to 32.9, 90 cents; 33 and above, $1.25.

October 3.—Effective at 7:00 this morning, the Humble Oil & Refining Company posted complete gravity schedules on Ranger, Moran, and Wichita and Archer County crudes. The schedule gave Moran, Wichita and Archer counties the same schedule as Ranger.

October 3.—Effective this morning at 7:00, The Texas Company changed its postings on Smackover crude to cover two gravities only, below 26, and above 26.

Current Postings

EASTERN STATES

	Oct. 10 1924	Oct. 10 1923
New York Transit	$2.85	$2.75
Bradford (Pa.)	2.85	2.75
Other Pa. Grades	2.75	2.50
Cabel	1.45	1.35
Ragland	.90	.75
Corning	1.50	1.45
Somerset, medium	1.55	1.25
Somerset, light	1.70	1.40

CENTRAL STATES

Illinois	$1.37	$1.67
Indiana	1.38	1.68
North Lima	1.58	1.88
South Lima	1.58	1.88
Plymouth	.75	1.05
Princeton	1.37	1.67
Waterloo	.75	1.15
Wooster	1.40	1.70

WESTERN KENTUCKY

Posted by Indian Refining Company for crude from Allen, Warren, Franklin, Davies, Barren, Cumberland and Monroe Counties.

36 and above	1.40	...
33 to 35.9	1.30	...
32.9 and below	1.20	...

CALIFORNIA

(Crude oil prices at well.)
Los Angeles and Orange Counties

14 to 19.9 gravity	$1.00	$ .60
20 to 20.9 gravity	1.01	.61
21 to 21.9 gravity	1.02	.62
22 to 22.9 gravity	1.03	.65
23 to 23.9 gravity	1.05	.68
24 to 24.9 gravity	1.07	.71
25 to 25.9 gravity	1.10	.74
26 to 26.9 gravity	1.13	.77
27 to 27.9 gravity	1.16	.80
28 to 28.9 gravity	1.19	.83
29 to 29.9 gravity	1.22	.86
30 to 30.9 gravity	1.25	.89
31 to 31.9 gravity	1.28	.92
32 to 32.9 gravity	1.31	.95
33 to 33.9 gravity	1.34	.98
34 to 34.9 gravity	1.37	1.01
35 gravity and above	1.40	1.04
Fuel Oil	1.40	...

Rosecrans Field

36 to 36.9 gravity	$1.46
37 to 37.9 gravity	1.52
38 to 38.9 gravity	1.58
39 to 39.9 gravity	1.64
40 to 40.9 gravity	1.70
41 to 41.9 gravity	1.76
42 and above	1.82

MID-CONTINENT

(Prairie Prices)

	Oct. 10 1924	Oct. 10 1923
Below 30 gravity	$ .75	$ ...
30 to 32.9 gravity	.90	...
33 to 35.9 gravity	1.10	...
36 and above	1.25	...

(Sinclair Prices)

Below 30 gravity	.75	...
30 to 32.9 gravity	.90	...
33 to 35.9 gravity	1.10	...
36 and above	1.25	...

(Texas Company Prices)

Below 30 gravity	.75	...
30 to 32.9 gravity	.90	1.25
33 to 35.9 gravity	1.10	1.50
36 and above	1.25	...

(Magnolia Petroleum Co.)

Below 30 gravity	.75	...
30 to 32.9 gravity	.90	...
33 and above	1.25	...
Corsicana, light	1.25	...
Corsicana, heavy (at wells)	.90	...
Mexia	1.25	...
Thrall	1.00	...

NORTH CENTRAL TEXAS

(Humble Oil & Refining Co.)

Corsicana, light (Powell)	1.25	1.00
Mexia	1.25	1.00
Currie	1.25	1.00
Thrall	1.00	...

RANGER

(Humble Oil & Ref. Co.)

30 and below	.90
30 to 32.9	1.10
33 to 35.9	1.25
36 and above	1.35

WICHITA AND ARCHER COUNTIES

(Texas)
(Humble Oil & Ref. Co.)

30 and below	.75
30 to 32.9	.90
33 to 35.9	1.10
36 and above	1.25

Moran Crude

30 and below	.75
30 to 32.9	.90
33 to 35.9	1.10
36 and above	1.25

SOUTH TEXAS

Mirando (Texpata)	.80	.75
Mirando (Magnolia)	.75	...

SOMERSET

(Grayburg Pipe Line Company)

Under 28 gravity	$ .90
28 to 30.9 gravity	1.00
31 to 32.9 gravity	1.10
33 and above	1.25

GULF COAST

Grade "A"	1.25	...
Grade "B" at Blue Ridge, Hull and Pierce Junction	1.05	...

LULING

All gravities	.90	...

LOUISIANA-ARKANSAS

Caddo

	Oct. 10 1924	Oct. 10 1923
38 gravity and above	1.35	...
38 to 37.9 gravity	1.25	...
32 to 34.9 gravity	1.15	...
Below 32 gravity	1.00	...

Homer

35 gravity and above	1.10	...
33 to 34.9 gravity	1.00	...
31 to 32.9 gravity	.90	...
Below 31 gravity	.75	...

COTTON VALLEY

All grades	.80	...

Haynesville

33 gravity and above	1.00	...
Below 33 gravity	.90	...

Bull Bayou

38 gravity and above	1.15	1.15
35 gravity and 37.9	1.00	1.05
32 to 34.9 gravity	.85	1.00
De Soto crude	1.20	1.25
Crichton	1.00	.90
Bellevue	1.10	.75
Jennings	1.25	1.00
Vinton	1.25	1.00
Edgerly crude	1.25	1.00

Smackover

Posted by Standard of La.

26 gravity and above	.95
25 to 25.9 gravity	.80
24 to 24.9 gravity	.70
Below 24.0 gravity	.85

Posted by The Texas Co.

Below 26 gravity	.85	...
26 and above	.95	...

Louisiana Oil & Refining Corporation

26 gravity and above	.95	...
25 to 25.9 gravity	.80	...
24 to 24.9 gravity	.70	...
Below 25 gravity	.85	...

El Dorado

38 gravity and above	1.10	...
Below 33 gravity	1.00	...
East Field (Calion)	.60	...

Stephens District

(Posted by Atlantic Oil Producing Company)

28 gravity and above 60 degrees	.90	...
26 to 27.9 gravity at 60 degrees	.90	...
23 to 25.9 gravity at 60 degrees	.70	...
Below 23 gravity at 60 degrees	.70	...

WYOMING-MONTANA

Wyoming

Elk Basin	1.20	1.35
Grass Creek	1.20	1.35
Rock Creek	.95	.90
Lance Creek	1.15	1.20
Mule Creek	.60	.75
Big Muddy	.75	.75
Salt Creek	.85	.90
Osage	1.15	1.35
Hamilton Dome	.80	1.35
Pilot Butte	.75	1.10
Lander	.20	1.10
Torchlight-Greybull	1.15	1.35

Montana

Sunburst	.90	.70
Cat Creek	1.20	1.35

CANADIAN CRUDE

Oil Springs	2.30	2.15
Petrolia	2.23	2.08

*Plus 2½ cents bounty.

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HOUSTON, TEXAS
WELLSVILLE, N. Y.
PHILADELPHIA, PA.
(under construction)

SINCLAIR OILS

Less Speed, More Recovery Industry's Need

George Otis Smith says that field operations are too frenzied, in talk before Congress

Tulsa, Okla., Oct. 7.—Declaring that the petroleum industry is a "frenzy of exploitation," George Otis Smith, director of the United States geological survey, told the international petroleum congress Tuesday that the first thing needed to make the industry safe for investors, operators and consumers is "less speed and more return."

"The petroleum industry—present and past," the speaker said, "is best described as a frenzy of exploitation. A blind faith that demand will overtake supply, that prices will at least equal costs, that profits will reward perseverance is the only trace of sanity underneath the delirium that is everywhere seen in the hunt for oil. To the great hazards imposed on man by Nature have been added even greated hazards made by man himself. The romance of hidden wealth to be won for human use has too often been turned into the tragedy of lost fortunes and quickly exhausted resources. 'Approaching demoralization' is the oft-repeated market report, but inveterate optimisim reacts with the effervescent hope that consumption is beginning to catch up with production and that prices will soon be better. This industry presents a marvelous record of growth; during the present century the flow of oil has increased more than tenfold. Yet such rapid progress, with its consequent rapid exhaustion of pool after pool, district after district, has been a pace that only the very strong or the very lucky could stand. It is a pace that kills—and loses money. The outstanding need today, then, is to substitute thrift for waste—to adopt a program that will lead to profits.

"Yours is an industry that has been wonderfully responsive to every demand made upon it. Inventive genius, masterful activity, and financial courage, energized by patriotic zeal, worked together during the war to provide the oil needed for victroy; but unfortunately, when that urge of national self-preservation ceased, the feverish haste to bring the oil to the surface was not abated. Last year our oil wells yielded one-tenth of the oil produced in this country since the beginning and one-sixteenth of the oil yet produced in the world. This flood of oil didn't just happen—on the contrary, the spectacular strikes of new pools were the result of large investments of brains and brawn and cash; nearly 25,000 wells were drilled in that twelve-month period, at a cost of more than half a billion dollars. Yet you, who make up the backbone of the industry that works these wonders, realize all too keenly that this record-breaking output was not a profitable output.

Must Control

"You in the oil business must plan control of this flood or you face nation-wide disaster. Because you are producing oil before it is needed you are producing it at a loss. And the oil you needlessly produce now will not be there for you to produce when it is needed. The oil man's logical query is, Where are my profits today? And the consuming public's proper query is, Where shall we get our oil tomorrow? A program for profits would serve both private and public interest.

"The economist tells us that petroleum, like the other mineral resources that make up so large a part of America's wealth, is a wasting asset. But we know it is worse than that; it is a wasted asset. Director Bain of the Bureau of Mines says: 'Under present methods of production not more than a quarter of the oil in the ground is brought to the surface. It is often less and very rarely more.' This measure of waste in production is astounding when we compare oil with almost any other natural product. In mining bituminous coal, for instance, the ratio is reversed; a quarter of the coal is left underground and three-quarters brought to the surface. We speak of oil as labor-cheap; possibly this is true only because we have been too saving of labor and too wasteful of oil.

Waste in Use

"And the waste does not stop with the oil left in the ground; unfortunately we have acquired spendthrift habits all along the line from the oil in the sands to the gasoline in the carburetor. The Bureau of Mines finds an average loss of 6 per cent between the well and the refinery and another loss of 4 per cent at the refinery; and finally we consumers of gasoline are so wasteful that we can not consider ourselves without fault. After all, the vital issue in American life may not be the price of gasoline but rather the waste of gasoline and of petroleum. With the consumer, waste is promoted by plenty and cheapness; with the producer, waste comes from haste. If you are to stop this leak in your business, you must ask yourselves, Why this haste that makes waste?

"It is all too evident that the oil business is traveling 'in high,' with the gear shift locked. Everything is speeded up; the urge of ever-increasing consumption stimulates the provision of surplus capacity in wells and refineries; then a lively competition among producers leads to an artificial stimulation of demand, and the merry round goes on. Even our laws foster free competition, when what we need is restraint. Public complacency and private initiative, both carried to excess, have conspired to accelerate the rate of speed until we wonder if the brakes would work under any condition.

"So uncertain are profits under the present rules of the game that the business is a speculation rather than an investment. Thus it is that Mr. Pogue attributes the sharp increase in production during the last five years to the inflow of new capital in the expectation of a shortage of oil, as well as to the improvement in the technique of finding and getting oil. But along with this added capital used in legitimate development the lure of the oil game has attracted other money, which has flowed into other channels; the post office department estimates that the contributions of our citizens to fraudulent oil concerns have been in excess of $300,000,000 a year. Then they cry with good reason that the oil business smells to heaven, for unfortunately the public makes little or no distinction between the parasitic fraud and the legitimate industry. You who are building up a great industry deserve to receive the capital that now goes to the unscrupulous promoter and is thus worse than wasted, but you get only an undeserved share of the bad repute. Could a part of the Hazard be removed from the present procedure of oil discovery and production, some of the waste be avoided, and more stabilization be introduced, you operators, engaged in the honest endeavor to produce oil, would be more readily distinguished from the gang of slick promoters who admit that the oil game is a gamble but point to the grand prizes won in this great American lottery. Under present conditions your great productive industry does not and can not enjoy the degree of public confidence it should have.

Race of Wells

"First in the program needed to make the oil business safe for investors, operators and consumers I would put less speed and more return. Much, yes most, of the frenzied haste with which oil wells are put down, regardless of cost or of efficiency or of market conditions, is due to the fugitive nature of ownership in oil and gas. The rule of action adopted is 'Get while the getting is good,' a kind of David Harum rule that not only violates the equities between property owners but lowers a great productive industry in this enlightened day to the economic plane of the chase of aboriginal times. Commonly the drilling program is nothing less than a race to get your neighbor's oil before he gets yours. On such a shaky foundation of tentative as well as temporary title no stable industry can be erected. Just as long as a divided ownership in the oil pool leads the separate owners to exercise the rights and follow the methods of highly competitive and purely individualistic strife in the capture of the oil, just so long will your business be characterized by haste and waste, and just so long will oil wells be drilled with greater and greater speed, seemingly without thought of capital cost or of market needs or of economic spacing or of conservation of gas. The fact that under the common law the proceeding is not illegal blinds us to the utter lack of equity or of economics in this game of grab. Far too many landowners and oil operators are now missing the prof-

its that are their due, and the general public will later pay its share of the losses in this losing game.

"The time and the place for drilling the wells required to take out the oil of a given pool should be treated as an engineering problem based on facts of geology and simple rules of economics, not controlled by the accidental relations of property lines. We must admit the need of more facts, but we should recognize the even greater need of making better and larger use of the facts we already have. Geology has been applied far too exclusively to the mere finding of oil. It is all very well to charge or even to credit geology with responsibility for the overproduction of oil, yet it would be better to give the geologist larger responsibility in aiding the oil engineer to get more of the oil from the sands the geologist may have helped to find. Geologic science stands ready to take this part in your program for profits.

Sings of Better Times

There are signs of better times—widespread interest in applying new methods of larger recovery in old and new fields; moves toward saving the gas in gas zones for use in increasing flow from oil sands; execution of plans of well spacing that will give a more effective drainage area to each well; efforts to consolidate leases under joint operation—all these are significant indications that the light is breaking in the West. But one and all of these reforms are inadequate unless you accept the basic principle of regard for the common interest; or, in plain language, unless you are ready to substitute the law of "love your neighbor as yourself" for the too commonly observed rule of "dog eat dog." Joint action that would weigh the equities of all landowners in an oil pool would result not only in a fair division of the proceeds but undoubtedly in more oil to be divided. Moreover, by avoiding the haste that wastes oil and disregards market supply—a double source of loss—the operation would yield the maximum profits.

"With this showing of possible profits I believe I could rest the case of the advantage of an enlightened self-interest that works through a joint and concerted community interest. But I feel that no one is more eager than you to secure the longest possible life for your industry. Whatever the accuracy of estimates of total oil in the ground "recoverable under present methods," neither owner nor Nation should be content with present methods. If you could double the present percentage of recovery you would double the geologists' estimate of oil reserves, and even then half the original content of the sands would be left in the ground. The program that seeks to recover the highest percentage of oil at the lowest cost in wells and during the longest period consistent with supplying the normal demand is a program that is patriotic as well as profitable.

"Even an absolute title to land is limited by the common interest of others; what we are accustomed to call "our own in fee simple" is always encumbered by "the correlation of rights and obligations necessary for the highest use of land by the entire community of proprietors." In a democratic society no landowner can live unto himself. Some day the courts, taking cognizance of the immoral and uneconomic aspects of town-lot drilling, may abandon the rule that was adopted from the common law relating to water in the excessively humid mother country and 'apply a rule better calculated to protect oil not actually developed.' It has been 65 years since the pioneers of your industry struck oil in Pennsylvania, 57 years since they struck oil in California, and 24 years since they struck oil in Oklahoma—isn't it high time that the legal talent you employ should consider constructively and cooperatively some rule of reasonable use. Such a rule should recognize the migratory and fugitive nature of oil and yet provide for its more equitable division among landowners than is possible under the present practice of capture through wasteful competitive drilling. Individuals among you can outline the program needed, but only the united action of the producers can put into full operation the reform that will stop the waste duo to haste.

Do Not Want Government Regulation of Oil

Attorneys general tell oil men at Tulsa banquet that people want only fair prices

Tulsa, Okla., Oct. 4.—That officials of the Middle Western states—one of the largest gasoline consuming areas in the United States—do not favor government regulation of the petroleum industry, but do want fair prices for refined products, was emphasized by speakers at a banquet given here tonight by the Mid-Continent Oil and Gas Association tendered to visiting attorneys general.

There were some 50 guests present including prominent oil men from the Mid-Continent and other sections of the country, and the following attorneys general: H. L. Ekern of Wisconsin, A. B. Dougherty of Michigan, Clifford L. Hilton of Minnesota, George F. Short of Oklahoma, and J. E. Killiher, deputy attorney general from the Department of Justice of the United States.

Claims Big Waste

As speaker for the attorneys general Mr. Ekern declared that in his opinion gasoline prices were too high and added that his state did not produce a drop and consequently wanted to obtain it in the open market as cheaply as possible. He expressed the belief that the oil industry as a whole was burdened with service station costs and in support of this belief he stated that in the recent oil investigation in his state when officials of both Standard Oil and independents came before the investigating body the conclusion was reached that there was a great waste in the distribution of gasoline in Wisconsin.

"We find that you have problems besides the production and refining costs," Mr. Ekern declared. "When a big pool comes in others rush to get into that pool and this practice appears to me to be wasteful. What surprises us is that when you drill a well you have to let it flow. Our people cannot understand why you cannot let the oil remain in the ground once you have found it and in that way prevent these periodical seasons of over-production. Naturally we want the oil to last just as long as possible and we want to buy the finished products just as cheaply as we can. None of us want the government to step in and fix a price. It is our belief that you should eliminate the conditions which interfere with those natural laws that fix prices."

Responding for the Mid-Continent Oil and Gas Association, D. W. Moffitt, vice-president of Cosden and Company, declared that this visit to the oil country was a good thing both for the oil industry and the state officials. Discussing the gathering and transportation of petroleum, Mr. Moffitt stated:

"The furnishing of facilities for developing 160 acres of oil land are, at the best, but temporary. They have a limited value because the products end in time. If facilities sufficient to handle the products of a great producing field are built and the field proves dry, the facilities are valueless and the investment is lost. Hence the great central storage plants which in turn mean the pipe lines. Small units cannot render the service so we must have the great units, few in number, with their extra capacity so they can move on short notice over a large territory. The present system of central plants and pipe lines is due to the character of the business. The problems of wildcatting would be unsolvable if it were not for this service peculiar to the oil industry. There cannot be a huge number of pipe lines or great central storage stations because the investment is too great. Any additional investment to meet possible gushers that may never come would be a waste of capital and a waste of service and only add to the cost of the finished product."

Not Regulated by Supply and Demand

Within certain limitations Mr. Moffitt declared that the price of crude does not necessarily change with the law of supply and demand. "The industry depends upon the great purchasing agencies for its existence," he said. "Our

(Continued on Page 37)

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FIELD NOTES AND PRODUCTION STATISTICS

U. S. May Need California Crude Next Year

Rumored that Eastern concerns have representatives on ground seeking contracts to run through 1925

By W. E. Green

Los Angeles, Calif., Oct. 4.—Rumors are going the rounds this week that at least six representatives of Eastern buyers of crude are in California seeking contracts calling for shipments of California crude to Atlantic domestic points throughout 1925. According to information available, which is very little, these representatives are not receiving very much encouragement.

Another rumor has it that the contract calling for the shipment of California crude by the Standard of California to the Standard of New Jersey and the contracts in force between the Associated-Pacific Oil Companies with New England Oil Refining and Cities Service will be cancelled not later than the first of the year.

These rumors may be true, or may not. No official expression from officials of companies involved can be secured.

One Contract to Remain

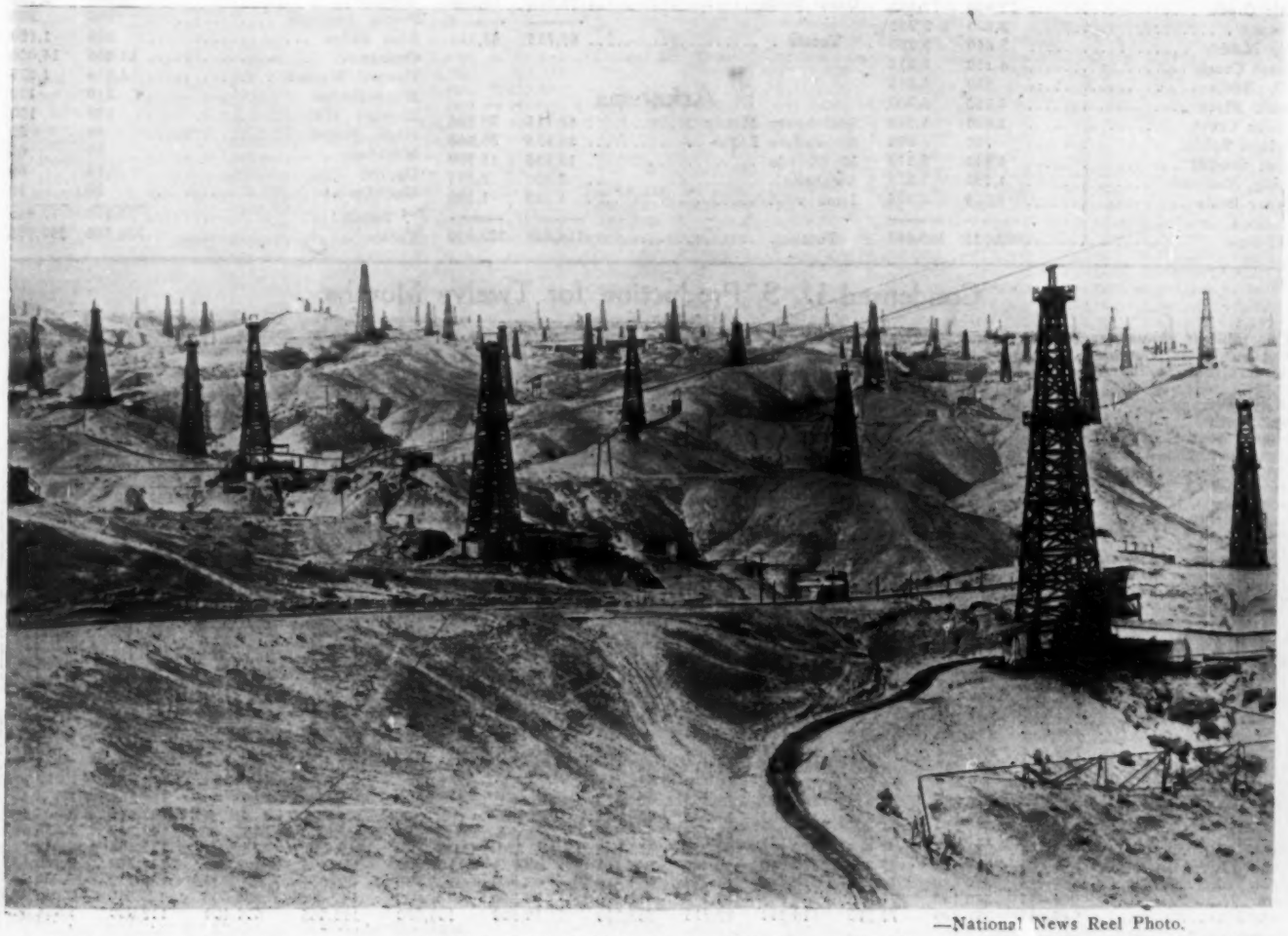
If these contracts are cancelled, the only remaining contract of importance that will be in effect in 1925 will be that between the California Petroleum Corporation and the Standard of New Jersey, which calls for a movement of 21,000 barrels a day. This contract will hardly be cancelled as it has two years more to run.

Students of the situation in California feel that refinery executives on the Atlantic domestic coast look for a large decline in production in the Mid-Continent in 1925 and that they will need crude of the lighter character such as produced in Southern California. They cannot look for any light crude to speak of from the Southern fields in Mexico. Hence they are turning to California. If this conception of conditions is true, California has nothing to fear. It is true that large companies are curtailing their activities to a considerable extent at this time. Many of the companies have reduced field forces to as low a point as possible. The stocks of crude, residuum and tops in California at this time exceed 102,000,000 barrels, and during the past week production in Southern California fields showed an increase of about 6000 barrels daily.

Present Prices May Stand

In view of these developments it is possible that the Standard of California will let crude posted prices remain as is. There has been much talk the past week, since the last reduction announced in the Mid-Continent by the Prairie, that if California prices were maintained, it would mean that shipments to Atlantic domestic points must be curtailed, as the margin has been wiped out. It is contended that California prices can be maintained through further adding to storage and keeping up the shipments of refined products

(Continued on page 33.)



—National News Reel Photo.

Perspective view of Naval Oil Reserves at Elk Hill, Calif., looking west at which Secretary of Navy Curtis D. Wilbur is now inspecting

Average Daily Production for all U. S. Fields

Oklahoma

	Past Week	Prev. Week
Tonkawa	101,110	108,750
Burbank	76,180	77,265
Bristow	55 150	55,200
Osage (outside Burbank)	54 000	54,100
Cromwell	40,650	42,100
Cushing	26,415	26,520
Okmulgee	26,400	26,490
Stroud	11,760	14,260
Hewitt	19,475	19,500
Healdton	13,370	13,375
Gilcrease-Papoose	15,520	15 450
Duncan & Walters	9,270	9,275
Wewoka	6,750	6,905
Other fields	79,300	79,390
Totals	535,350	548,580

Louisiana

Haynesville	16,710	16 930
Caddo Light	10,200	9,850
Caddo Heavy	2,040	2,000
Homer	7,115	7,250
Bellevue	4,300	4,500
Vinton	5,400	5,425
Bull Bayou	4,500	4,675
Cotton Valley	5,140	7,040
Lake Charles	2,000	2,000
Elm Grove	775	765
Evangeline	875	775
Edgerly	425	470
Anse La Butte	20	20
Totals	59,500	61,700

Wyoming-Colorado

Salt Creek	76,330	77,490
Teapot	2,520	2,250
Big Muddy	3,840	3,860
Grass Creek	4 150	3,215
Elk Basin	930	1,015
Rock River	3,050	3,200
Lance Creek	1,620	1,910
Poison Spider	710	890
Lost Soldier	4,940	5,110
Craig, Colorado	1,750	1,875
Other fields	2,715	2,925
Totals	103,755	103,840

California

Los Angeles, Calif., Oct. 4.—The daily average production of California fields the past week, compared with the previous week, with number of producing wells in several Southern fields, was about as follows:

	Last Week	No. Prod. Wells	Prev. Week
Long Beach	143,500	491	141,000
Santa Fe Springs	58 000	350	59,000
Huntington Beach	42,250	281	42 000
Torrance	56,000	458	54,500
Dominguez	34,000	24	30,600
Rosecrans	2 550	6	2,540
Others	272,100	...	270,360
Totals	608,400		609,000

Montana

	Past Week	Prev. Week
Cat Creek	3 690	3 745
Kevin-Sunburst	3,725	3,660
Other fields	95	110
Totals	7,510	7,515

Kansas

Greenwood	21,380	21,390
Eldorado	16,875	16,890
Elbing and Peabody	8,330	8,340
Rainbow Bend	8,600	8,000
Fox-Bush	5,050	5 100
Augusta and Douglas	3,255	3 265
Blankenship	2,920	2,925
Florence and Covert	2,485	2,500
Other fields	18,820	18,700
Totals	87,715	87,110

Arkansas

Smackover Heavy	67 115	70,875
Smackover Light	36,175	36,840
El Dorado	11,125	11 200
Stephens	2,300	2,295
Irma	1,335	1,300
Totals	118,050	122,510

Texas

NORTH-CENTRAL

	Past Week	Prev. Week
Corsicana-Powell	76,020	75,525
Archer County	29 200	29 300
Mexia	26,575	26,250
Richland	25,250	24,150
Electra	20,330	20,570
Stephens County	18,010	18,255
Burkburnett	18,175	18,155
Ranger-Eastland	6,915	6,925
Desdemona-Gorman	6,260	6 250
Reagan County	5 530	5 715
Young County	3,800	3,765
Moran-Shackelford County	3,085	3,130
K-M-A	2,980	3,010
Currie	2,645	2,670
Mitchell County	1,710	1,645
Iowa Park-Shappell	1,355	1,385
Panhandle District	1,320	1,335
Palo Pinto County	815	820
Brown County	650	675
Petrolia-Clay County	410	415
Coleman County	135	130
Thrall-Williamson County	60	65
Jack County	25	25
Scurry County	15	15
Totals	251,270	250 180

GULF COAST

Spindle Top	1,175	1,040
Saratoga	1,600	1,600
Batson	1,760	1,600
Goose Creek	11,300	10,900
Sour Lake	4,375	4,500
Hull	16,900	17,600
Richmond	1,000	175
West Columbia	17,000	17 200
Humble	5,540	6,050
Pierce Junction	200	200
Blue Ridge	800	1,180
Orange	11,600	14,000
Damon Mound	1,375	1,375
Nacogdoches	110	110
Barbers Hill	150	100
High Island	40	50
Markham	90	65
Dayton	75	80
Hockley	20	10
Totals	75,110	77,835
Totals	326,380	360,965

Condensed U. S. Production for Twelve Months

(Stated in Barrels)

This table is carried each week by The OIL WEEKLY, and shows daily production average for each state or section. Figures for Oklahoma, Kansas, Texas, Louisiana, Arkansas and Mountain States are compiled by The OIL WEEKLY, while estimates for California and Eastern States are furnished by the American Petroleum Institute.

Daily average for month	*Mid-Continent	North Central Texas	Texas Coastal	†Texas Total	Kansas	Okla.	Louisiana	Eastern States	Wyoming-Montana	Calif.	Ark.	U. S. Total
August	726,981	217,208	105,966	323,148	89,998	419,775	97,936	120,750	83,938	375,000	28,834	1,618,763
September	716,107	207,467	107,790	314,932	89,760	418,880	101,857	114,200	80,490	387,000	33,135	1,540,371
October	714,906	200,465	115,130	316,370	90,404	424,037	97,502	116,375	86,412	423,750	34,127	1,489,005
November	711,521	199,223	114,150	388,376	91,098	421,200	93,410	116,375	106,092	450,000	77,225	1,668,776
December	692,702	170,187	111,819	242,010	87,508	435,007	86,513	114,900	103,679	484,000	107,732	1,722,349
January (1923)	708,372	184,885	115,628	304,790	86,720	436,767	81,205	113,500	123,254	517,500	111,920	1,770,645
February	712,007	180,364	96,984	286,493	85,298	446,345	78,068	112,500	110,328	587,500	101,346	1,805,496
March	720,287	184,582	89,873	283,355	86,012	449,693	75,352	109,900	118,580	653,000	108,630	1,888,522
April	756,381	192,148	92,320	293,780	86,133	478,100	76,854	106,000	127,860	711,250	102,099	1,983,026
May	793,774	203,776	90,905	304,032	85,500	504,498	75,368	109,125	125,680	700,125	109,033	2,010,840
June	824,297	217,162	92,240	320,250	85,255	521,880	72,745	110,300	129,559	773,000	133,592	2,159,818
July	866,665	274,330	91,795	378,335	84,785	508,405	70,085	113,000	137,300	851,000	132,395	2,275,305
August	826,982	278,574	94,398	393,780	82,741	464,416	68,739	112,625	137,909	866,250	123,000	2,251,966
September	830,517	371,730	93,649	443,461	77,078	421,763	68,935	108,400	157,742	858,700	127,955	2,269,176
October	876,059	408,036	84,120	511,483	71,362	371,657	65,305	107,750	139,912	823,125	125,143	2,240,741
November	935,975	479,383	82,747	580,700	69,337	287,253	64,701	108,125	151,225	768,275	124,188	2,253,806
December	729,591	283,130	78,033	378,478	68,444	378,017	61,138	110,300	146,770	723,845	120,049	1,987,041
January (1924)	685,540	243,120	75,085	334,485	67,815	374,605	59,125	108,000	144,735	698,965	114,255	1,900,985
February	729,933	254,180	81,131	362,849	68,183	407,568	59,449	104,500	141,775	675,425	114,726	1,934,476
March	762,684	284,874	78,567	388,221	69,864	407,946	55,783	97,800	128,352	650,790	119,869	1,917,023
April	777,590	276,595	76,755	380,005	71,015	429,980	54,740	101,250	127,700	649,825	128,750	1,943,270
May	763,320	267,475	74,175	374,915	71,490	424,355	60,655	103,800	127,770	640,930	148,630	1,952,545
June	799,230	260,785	74,335	375,310	74,265	464,175	62,660	105,750	125,735	628,400	157,165	1,993,465
July	815,830	254,665	75,445	378,365	81,545	479,620	63,855	107,175	124,305	620,175	148,655	2,003,695
Aug.	861,640	254,520	75,700	377,045	85,765	521,355	62,595	107,000	123,895	619,200	142,740	2,037,890
Sept. 6	886,535	256,215	77,905	373,170	86,375	543,945	62,370	107,000	119,530	615,000	135,365	2,042,755
Sept. 13	884,960	255,900	77,360	370,010	86,405	542,655	60,820	107,000	116,495	612,000	134,750	2,030,135
Sept. 20.	989,235	250,680	74,715	360,645	87,145	551,410	63,760	108,500	116,055	610,000	132,750	2,030,265
Sept. 27.	966 855	250,180	77,835	360,965	87,110	548,580	61,700	108,000	117,300	609,000	122,510	2,015,165
Oct. 3	949,445	251,270	75,110	326,380	87,715	535,350	59,500	108,000	111,265	608,400	118,050	1,954,660

*Includes Texas, Kansas, Oklahoma.

NOTE—Mexia production included in North Central Texas.

U. S. May Need California Crude Next Year

(Continued from page 31.)

to England and other points. Fuel oil is in constant demand today in California with the price firm at $1.40. This price has held steady for several months and there is no signs of a let up in the demand. Rather the demand seems to be increasing.

Shut In Production

Four weeks ago it was published in these columns that there was about 26,000 barrels of production shut in in the state. Recently these figures were doubted by the executive of one large company and he brought about a check to see if The OIL WEEKLY figures were correct. It was found that they were and that since that time about 1000 barrels more had been shut in. There may be another one or two thousand barrels shut in in the next few weeks, if production again increases, but this class of production can be closed in without injury to the wells. The oil is not taken from the ground by other companies and in cases of this kind where the leases are isolated, it has been found that wells can be closed in for months and when reopened they produce as much oil as before, if not more for a few weeks. It is simply a case of permitting the oil to remain in its natural storage until needed. Of course there are many leases so located that it is impossible to do this, and under these circumstances, the wells must be produced or wells on adjoining leases will get the oil.

Water in Rosecrans Well

Early this week the General Petroleum's Vaughn 1 in the Rosecrans field came in for about 1000 barrels of 36.9 gravity oil from 4752 feet. This well is located about 1000 feet southeast of Union's Athens 1 and about the same distance northwest of Union's Gray 1, thus proving the territory lying between. Athens 1 is producing from 4950 feet, while Union's Gray is producing from 4153 feet. But there is a well 300 feet from Union's Gray to the east that has not found the pay sand at a depth of about 300 feet below the Gray depth.

The General Petroleum's Vaughn brought some encouragement to operators in the Rosecrans field, but Friday afternoon a cloud appeared. Water broke into the hole and Saturday morning it was not known if the water was in the oil sand or whether it had broken in around the shoe. It will be necessary to kill the well and go into the hole to determine the source of the water. Developments at Rosecrans during the past two weeks indicate that the field cannot possibly make more than 20,000 to 25,000 barrels a day in the next three to four months. The high gravity wells are declining too fast and there is too much water trouble to be settled.

C. C. Julian the past week shut down two wells he was drilling in the Rosecrans field and six producing wells at Torrance. It is generally believed that the production of the wells had declined to the extent that they were hardly worth pumping.

Oil at Seal Beach

The Shell Company during the past week let it be known that one of its Seal Beach wells was producing some oil and much more water. The company's second well at Seal Beach also shows oil, and it is understood that a location has been made for a third test. Seal Beach is located about half way between Long Beach and Huntington Beach. Officials of the Shell seem to feel that they will secure production in this section, but many other local oil men do not feel the same way about it.

A New Field

Standard Oil Company during the past week completed its wildcat on the Los Angeles Investment tract near Inglewood for a flush production of 175 barrels of 19 gravity oil at 2134 feet, probably proving another field for Los Angeles County. The well was known as No. 1-1. The well is located on the Los Angeles Investment Company tract of 1000 acres bordering on Bald-

Imports of Petroleum at Principal United States Ports

The following represents the total imports of crude oil for the month with the current month given by weeks:

	Atlantic Ports						Gulf Coast Ports					Total at All Ports
	Baltimore	Boston	New York	Philadephia	Others	Total	Galveston	N. Orleans Baton Rge.	Port Arthur Sabine Pass	Tampa	Total	
April	370,000	669,000	1,074,000	625,000	591,000	3,319,000	1,615,000	1,020,000	1,135,000	168,000	4,362,500	7,681,500
May	344,000	515,000	1,026,000	437,000	615,000	2,937,000	1,351,000	910,000	1,184,000	127,000	3,582,000	6,519,000
June	314,000	421,000	1,791,000	755,000	809,000	4,090,000	1,515,000	1,142,000	1,062,000	229,000	3,948,000	8,038,000
July	287,000	465,000	1,806,000	448,000	898,000	3,876,000	1,471,000	1,120,000	833,000	92,000	3,516,000	7,392,000
September	268,000	565,000	1,744,000	660,000	686,000	3,923,000	1,776,000	1,397,000	880,000	224,000	4,277,000	8,202,000
October	365,000	292,000	1,194,000	536,000	816,000	3,203,000	988,000	1,330,000	380,000	50,000	2,248,000	5,951,000
November	223,000	395,000	1,194,000	576,000	757,000	3,145,000	1,478,000	1,000,000	551,000	111,000	3,287,000	5,432,000
December	474,000	574,000	1,243,000	606,000	1,024,000	3,917,000	2,019,000	1,832,000	933,000	259,000	5,043,000	8,960,000
January	398,000	531,000	1,060,000	376,000	949,000	3,314,000	1,295,000	887,000	689,000	15,000	2,936,000	6,250,000
February	520,000	527,000	639,000	458,000	771,000	2,865,000	1,558,000	1,284,000	525,000	195,000	3,562,000	6,427,000
March	802,000	734,000	1,243,000	502,000	1,668,000	5,049,000	2,346,000	1,689,000	1,116,000	301,000	5,257,000	10,281,000
April	653,000	664,000	1,371,000	407,000	1,067,000	4,162,000	1,641,000	1,492,000	510,000	68,000	3,711,000	7,873,000
May	693,000	618,000	1,368,000	264,000	1,329,000	4,272,000	1,398,000	1,308,000	884,000	169,000	3,759,000	8,031,000
June	515,000	466,000	1,864,000	292,000	1,026,000	4,163,000	1,769,000	1,079,000	685,000	145,000	3,678,000	7,841,000
July	375,000	260,000	1,971,000	179,000	1,114,000	3,899,000	1,418,000	1,211,000	579,000	153,000	3,361,000	7,260,000
August	463,000	400,000	1,958,000	468,000	788,000	3,945,000	1,857,000	1,210,000	547,000	80,000	3,694,000	7,639,000
September 6	103,000	.....	300,000	60,000	168,000	631,000	132,000	203,000	234,000	40,000	609,000	1,240,000
September 13	.....	64,000	124,000	.....	110,000	298,000	326,000	326,000	172,000	47,000	871,000	1,696,000
September 20	269,000	61,000	125,000	110,000	316,000	881,000	210,000	625,000	68 000	.....	903.000	1,784,000
September 27	.....	66,000	218,000	160,000	168,000	612,000	380,000	146,000	116,000	.....	642,000	1,254,000

NOTE—Figures by American Petroleum Institute.

Receipts of California Oil at Atlantic Coast Ports

The following shows the receipts of California oil at Atlantic Coast ports by months with the current month given by weeks:

	Atlantic Ports						Gulf Coast Ports					Total at All Ports
	Baltimore	Boston	New York	Philadephia	Others	Total	Galveston	N. Orleans Baton Rge.	Port Arthur Sabine Pass	Tampa	Total	
March	442,000	184,000	1,355,000	496,000	615,000	2,691,000	.....	.....	.....	.....	.....	2,691,000
April	105,000	256,000	2,456,000	502,000	320,000	3,639,000	.....	478,000	.....	.....	478.000	4,117,000
May	444,000	72,000	1,259,000	764,000	964,000	3,553,000	.....	300,000	53,000	.....	353,000	3,906,000
June	821,000	160,000	3,206,000	826,000	808,000	5,821,000	.....	664,000	.....	.....	664,000	6,485,000
July	443,000	75,000	2,068,000	741,000	699,000	4,080,000	.....	559,000	.....	.....	559,000	4,639,000
August	329,000	229,000	2,956,000	836,000	683,000	5,033,000	.....	970.000	70.000	.....	1,040,000	6,073,000
September	1,028,000	237,000	2,581,000	621,000	443,000	4,910,000	.....	703,000	.....	.....	703,000	5,613,000
October	779,000	224,000	2,503,000	779,000	429,000	4,714,000	.....	746,000	.....	.....	746,000	5,460,000
November	591,000	155,000	2,302,000	584,000	271,000	3,903,000	.....	935,000	.....	.....	935,000	4,838,000
December	454,000	215,000	2,901,000	813,000	753,000	5,136,000	.....	729,000	.....	.....	729,000	5,213,000
January	619,000	77,000	3,156,000	659,000	503,000	4,660,000	.....	615,000	.....	.....	615,000	5,275,000
February	326,000	145,000	2,811,000	842,000	75,000	4,199,000	.....	810,000	.....	.....	810,000	5,009,000
March	298,000	77,000	3,352,000	989,000	413,000	5,129,000	.....	.....	.....	.....	.....	5,129,000
April	170,000	77,000	2,633,000	378,000	224,000	3,482,000	.....	.....	.....	.....	.....	3,482,000
May	190,000	147,000	2,771,000	411,000	273,000	3,792,000	.....	315,000	.....	.....	315.000	4,107,000
June	522,000	147,000	2,490,000	443,000	220,000	3,822,000	.....	.....	.....	.....	.....	3,822,000
July	167,000	70,000	2,017,000	374,000	188,000	2,816,000	.....	75,000	.....	.....	75.000	2,891,000
August	400,000	.....	2,914,000	288,000	520,000	4,354,000	.....	30,000	.....	.....	30,000	4,384,000
September 6	.....	72,000	371,000	77,000	.....	520,000	.....	.....	.....	.....	.....	520,000
September 13	74,000	76,000	512,000	.....	.....	662,000	.....	.....	.....	.....	.....	662,000
September 20	216,000	.....	374,000	75,000	.....	665,000	.....	.....	.....	.....	.....	665,000
September 27	.....	72,000	763,000	175,000	81,000	1,091,000	.....	.....	.....	.....	.....	1,091,000

Note—Figures by American Petroleum Institute.

Panoramic view of a section of the Phillips Petroleum and Carter Oil Companies

Oklahoma Production Continues Decline

All major producing areas lose substantially in average output from last week's totals

Tulsa, Okla., Oct. 7.—A rather encouraging decline in the daily average production of practically all major producing pools in Oklahoma is perhaps the important occurrence for the past week.

With the exception of the Gilcrease-Papoose pools in northern Hughes county, not a single field in the state is showing an increase in production. That pool is only showing an increase of 68 barrels, however; there were no new wells to boost the production.

Following is a list of the major producing pools of the state showing the number of wells and the production of same:

Wewoka, 6,762 barrels from 76 wells, a decrease under last week of 15 barrels and an increase of 3 wells.

Cromwell, 40,649 barrels from 103 wells, a decrease of 1,452 barrels, and an increase of 6 wells.

Gilcrease-Papoose, 15,518 barrels from 52 wells, an increase of 68 barrels from the same number of wells.

Burbank (Osage county side), 61,411 barrels from 1,420 wells. Burbank (Kay county extension), 14,770 barrels from 195 wells. Total for Burbank, 76,181 barrels from 1,615 wells.

Tonkawa, 101,107 barrels from 704 wells, a decrease of 7,642 barrels, and an increase of 2 wells.

Stroud, 11, 758 barrels from 55 wells, a decrease of 2,499 barrels from the same number of wells.

Burbank Curtailed

Activity in the Burbank field is now at a minimum and operators in that field are of the opinion that it will remain as such for some time. It was reported that one of the major companies had given a mortgage on their properties in the Burbank for three million dollars to the Osage Nation for security on deferred payments. This is perhaps one of the most concrete examples of an over-production in the state at this time, but whether this can be taken as a signal of hard times or the desire of this company to hold their storage for higher prices is something which cannot be explained.

The Gypsy Oil Company did not run a single barrel of storage to their tanks during the past week, running their entire production to the Gulf Pipe Line Company of Oklahoma for delivery to the Port Arthur refinery.

The Texas Company No. 6, in the northeast corner of section 29-25-8 in Osage county, which was making approximately 9,000 barrels last week, is now down to 6,000 barrels per day. The Mid-Kansas Oil and Gas Company diagonal offset to the well is reported to have quit flowing. Both wells were producing from the second break in the Mississippi lime. The Mid-Kansas well is located in the southwest corner of section 21-25-8.

The Marland Oil Company of Oklahoma lease in section 20-23-8, known as the famous Pettit, is now producing only 3,000 barrels per day. The west side of the lease is cutting a large amount of water and the company is now erecting a large treating plant on the lease. No. 7 well on the east side of the tract is also making some water, but operators are of the opinion that it was drilled too far into the sand. The men on the lease claim that the production of the lease can be boosted somewhat but that storage facilities prohibit such action.

Tonkawa Declining

The deep sand wells in the Tonkawa field continue to decline in daily average production and the new wells are rather small in comparison to the first wells from the deep horizon. Comar Oil Company's No. 1 Cgg on the east side appears to be directly on top of an overthrust fault. Early correlations of the sand shows an expected production at 4020 feet, but the well has apparently gone from the Mississippi formations back to the Pennsylvania formations underlying the lime. After going through the lime, it was found that the Wilcox sand was not there as expected but instead a series of blue shales and sands was found. This corresponds to formations already passed through farther up in the hole.

The Washorn Oil and Gas Company are building an additional 80,000-barrel tank on their farm in section 32-23-3 east. The company now has a 55,000-barrel tank full of oil and is running into another 80,000-barrel tank.

The Comar Oil Company No. 1 Duncan is averaging approximately 1,300 barrels of oil per day. About October 21 the school land, consisting of the east one-half of section 16-29-1 west, will be put up for sale. This land is north of the Duncan well and supposed to be located on top of the structure as indicated by core drilling.

Production in the Cromwell field continued to decline but it is expected

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win Hills. The company paid half a million dollars bonus on the tract, with royalty and other obligations which included a percentage of the profits going to the owners of the land.

The well first found a pay sand around 1000 feet, which was judged to be good for around 10 barrels a day on the pump. The well was drilled deeper and at 2134 feet was placed on the pump with about 140 feet of screen on bottom. A scond well was drilled near the producer to about 1000 feet to test out the shallow oil strata, but it was found not worth producing, at least at the present. The Standard some weeks ago leased 620 acres adjoining, giving the company more than 1600 acres in a body. A third well on the other lease has been drilled to a depth of 4050 feet, without finding the deeper pay. This third well is about three-eighths of a mile a little south of west of the producer.

There is some question about the name of the new field. The Standard probably would like to see it named Inglewood after the nearest town, although it is understood that some others want to call it Baldwin Hills field. Baldwin Hills is near by, but it is not thought the field would touch the hills.

leases in the northwest extension of the Burbank field in Osage County, Oklahoma —Photo courtesy National Turnbuckle Derrick Company, Tulsa.

that the already proven tracts in the northwest extension will boost the production 25,000 barrels above the figure now, however, this flush production will not hold up long for there is considerable waste of gas in the field and 97 producing wells to release the pressure.

The Laurel Oil and Gas Company well in the southeast corner of the southwest of the northwest of section 4-10-8, one of the determining factors of the future of Cromwell, made 20 barrels of oil during the past 36 hours from a total depth of 3422 feet, or ten feet in the sand. A string of tools has been lost in the hole and a fishing job is now in progress. The well does not look as good as it did last week.

T. B. Slick No. 1 Sands, in the southwest corner of the southeast of section 35-10-9, Okfuskee county, a northern extension to the Wetumka area, has been drilled four feet deeper to a total depth of 3337 feet and the production was increased from 1,600 barrels to 2,200 barrels per day.

The Texas Company No. 1 Ellis, the largest well in Pawnee county, making 150 barrels per hour initial, continues to make approximately 140 barrels per hour. This well is located in the northwest corner of the northwest of section 27-20-6, near Quay, and about six miles west of the town of Jennings. This was an old well drilled deeper and the sand was topped at 3074 feet, first gas at 3072 feet and the first oil at 3093 feet. The total depth of the well is now given as 3103 feet. Other activity near this well is as follows: The Twin States No. 1 in section 8-20-7 is swabbing 40 barrels daily from a total depth of 2616 feet, and the Markham Oil Company No. 1 in section 9-20-7, in the southwest corner, topped the sand at 2592 feet and is twelve feet in the sand drilling at 2616 feet with 1000 feet of fluid in the hole.

The Prairie Oil and Gas Company has deepened their No. 1 Seay in the southwest corner of the northwest of the southwest of section 34-6s-5w in Jefferson county, and the well is now reported to be making approximately 500 barrels per day from a good substantial sand. The total depth of the well is now 1364 feet.

W. G. Talbot, general manager of the Western Pipe & Steel Company, Los Angeles, is in Honolulu for his annual vacation.

Rainbow Bend Continues in Interest in Kansas; Well Extends Field 700 Ft.

Wichita, Kans., Oct. 7.—The Rainbow Bend field of Cowley county was extended 700 feet to the east when Waite Phillips Company and associates' No. 1 Nelson, southwest corner of the east half of the northeast of section 20-33-3e, found the sand at 3201 feet, a depth slightly lower than any former completion.

It is not known to what cause the difference in depth can be laid, as the surface elevation is approximately level. The first 24 hours the well made 1275 barrels and has since been averaging between 50 and 60 barrels, at one time getting as high as 83 barrels an hour.

The new well is located on a block of 3,000 acres, and is a diagonal offset to No. 2 Johnson, which started off at 800 barrels. The gas pressure is greater than in any of the former wells completed. The tools were carried out of the hole. In the last 24 hours the well registered a total of 1497 barrels, according to Waite Phillips Company.

The next well due in the Rainbow Bend field is No. 1 Dora Johnson, northwest corner of the east half of the southeast of section 20-33-3. This is one location south of the Nelson well. The Johnson test is drilling below 2880 feet. The Hansen test of the Waite Phillips Company, section 31-33-3, south of Rainbow Bend pool, probably will be drilled to the Wilcox or Turkey Mountain sands. The Rainbow Bend field is producing 5962 barrels from 11 wells.

Great activity prevails in Cowley county around the Alcorn Oil Company's No. 1 Graham, northeast corner of section 9-33-3, two miles north and a mile east of the Rainbow Bend field. Four wells have been drilling for several weeks, and within the past week six new rigs have been moved in. The Marland Company is taking all the oil produced in the Rainbow Bend field and the Graham. The drilling wells are:

Company	Well	Section	Depth
Gypsy Oil Company's	Poor 1,	3-33-3	2390
Waite Phillips Co.'s	Alexander,	4-33-3	1850
Marland Refg. Co.'s	Wright 1,	10-33-3	1900
Alcorn Oil Co.'s	Bower 1,	10-3-3	spudding

Rigs are up for the following:

Alcorn Oil Co.'s Graham 2, one location south of No. 1.

Graham 3, southeast corner of the northeast corner of 9-33-3.

Graham 4, one location west of No. 1.

Waite Phillips Co.'s Johnson 1, northeast corner of the southeast ¼ section 9.

Marland Refining Co.'s Wright 2, one location south of No. 1 in section 10-33-3.

Roxana Petroleum Corp.'s Spreun 1, northwest corner of the southwest ¼ of section 10.

The Valerius Oil & Gas Company have cancelled all new work and are moving out of the Russell county oil field. Following is a listing of the Valerius Company's holdings in the county:

Valerius No. 1, Oswald, 90 barrels.

Valerius No. 1, Ed Oswald, 595 barrels.

Valerius No. 1, Munsell, 100 barrels.

Valerius-Oswald, No. 2, Oswald, 200 barrels.

Water Not Seriously Affecting Richland

Corsicana, Texas, Sept. 30.—Although only a few inside locations remain to be drilled in the Richland field, the daily output of the field is not reflecting a rapid decline in production, and pipe line runs late last week amounted to 23,900 barrels daily from 73 pumping and flowing wells. These figures indicate that the field is averaging slightly more than 327 barrels of oil daily per well, even though water has put in its appearance on all sides of the producing structure. This high yield per well is largely due to several unusually good producers owned by the Sun Oil Company on the W. P. Brown lease and on the R. R. Davis lease belonging to W. B. Tucker and Fox. The Sun Oil Company has 13 wells doing 7,290 barrels per day, or about 560 barrels per well, while the six wells on the Tucker and Fox property are maintaining an average of 952 barrels daily each. The Galena Signal Oil Company is purchasing the latter production on contract, and the Pure Oil Pipe Line Company is making the deliveries to the Coast.

Marland Moves Reagan Crude to Tide Water

Negotiations now underway may mean sale of Big Lake leases and building pipe line

Fort Worth, Texas, Oct. 7.—The purchase of 50,000 barrels of Reagan County crude by the Marland Oil Company from the Big Lake Oil Company for immediate shipment via tank cars to Texas City, Texas, where the Marland Interests have an export station, will place the high gravity crude from this new field at tidewater for the first time, as previous sales have been confined to refineries at Fort Worth, El Paso and Phoenix, Arizona. The deal was closed in New York City late last week, and deliveries are to be made in solid train loads as fast as the Orient railroad can move the loaded cars from the field. Considerable importance is attached to this crude purchase by the Marland interests, as it is known that negotiations are now pending in New York City between Marland and The Texon Oil and Land Company for the sale of checkerboard leases within the large leasehold owned by the latter concern in the Big Lake oil field, while the Texon Company also owns a one-fourth interest in the Big Lake Oil Company. It is understood that in addition to the cash bonus asked by the Texon Company for leases within its solid block, a pipe line outlet for the field is part of the consideration, and if such a deal is closed a big drilling campaign will be launched immediately on the vast amount of acreage already proven for production in the field.

Steel storage is beginning to move into the Big Lake oil field, and the two companies owning the ten pumping and flowing wells completed to date are now able to handle all oil produced, with the aid of tank car shipments from the field. The Big Lake Oil Company is now filling its second completed 55,000 barrel tank with oil, and has two more tanks of this size nearing completion, while materials are due next week for two more, making a total of six 55,000 barrel tanks, besides a number of lease storage tanks. The Kaw Boiler Works is erecting this tankage, and is to deliver a completed tank every 14 days. The Texon Oil and Land Company sent out inquiries for four 55,000 barrel tanks recently, and Youngstown Boiler and Tank Company is to start work immediately on the erection of one of these tanks. Other tankage will be erected by the above two companies as the demand occasions.

Production Increase

The production of the Big Lake field increased to above 6000 barrels early this week as result of the flow of the Big Lake Oil Company's University 11 jumping to about 2900 barrels daily, and on several occasions during the past two weeks this well has increased to about 3400 barrels daily without being agitated or tampered with. This well was completed July 31, and is credited with having produced in excess of 175,000 barrels of oil with no water showing. The Big Lake Oil Company's University 9 and 10 are flowing about 775 barrels each, and are showing from 1½ to 2 per cent water, while the company's other wells are making less than 100 barrels daily each. The Texon Company's single producer is now flowing about 1600 barrels daily with no water showing, and most of this production is being sold to the Rio Grande Oil Company, which has a contract to run for several weeks more at a fixed price and for a maximum purchase of 2000 barrels daily. The Rio Grande Oil Company is erecting 100,000 barrels of additional tankage at its El Paso refinery to store crude, and the new storage consists of one eighty and one twenty thousand barrel tank. The Big Lake Company's crude shipments to the Transcontinental Oil Company's refinery at Fort Worth have been reduced to about 500 barrels daily, owing to storage being limited at the latter place.

The Big Lake Oil Company spudded two new tests in section 12, block 2, on University lands last Thursday, both being on inside locations. These two tests are listed as Numbers 13 and 15, and rotary equipment is being used on the latter one, with J. D. Wade contracting for the drilling, and Root and Rhoades are drilling the former. A race is being staged between the drilling crews, and the result will be watched with interest, as rotary equipment has been tried only once in this field, but it proved successful. Harry Reigle has the contract to drill No. 14 in section 1, block 2, and will probably spud late this week. The Transcontinental Oil Company is rigging up to drill in the northeast corner of section 10, block 1, on University lands, and permits covering sections 1, 2, 11, 12, 3, 4, 9, 10, 5, 6, 7, 8, 15, 16, 21 and 22, all block 1, have been assigned to this combination. Gulf holds permits on the first four sections listed above, and has donated 160 acres off the west side of section 11 to Transcontinental to get the test drilled near its acreage.

B. H. (Buster) Cogdell and associates have made a location three miles south and slightly east of the Texon Company's oil producer, with The California Company's location midway between. The Cogdell interests own permits on the west half of section 23 and the east half of section 24, block 8, University land, and will drill 330 feet each way from the southwest corner of the northwest quarter of section 23.

The Texon Oil and Land Company's University 1, group 2, located in section 22, block 9, and exactly two miles east of the largest producer in the field, is reported to be drilling below 3040 feet, with no oil showing. Indications are that this test will not make a producer from the regular pay, and it will probably be carried considerably deeper in search of lower producing horizons, which are believed to exist in this general section of the state. The completion of a producer at this point would give the field a width of about five miles, while if a dry hole is obtained there is ample room for the trend of production to take a southeast course from the present proven area. It is reported that the Texon Company is moving in materials to drill one of the locations announced several weeks ago in section 26, and between the above interesting test and its producer in section 1, block 8.

Drilling Becoming Active Around Late Completions in Wilbarger County Pool

Wichita Falls, Texas, Oct. 7.—The development of close in acreage around the recent big completions from the 2000 foot sand in the South Vernon pool in Wilbarger County section of the North Texas district is getting underway on a large scale, and another flowing well was brought in during the past week. The new completion was made Sunday when the Winnipeg Oil Company's D. Bond et al 1, located in the northeast corner of section 100 and a south offset to the largest well in the pool, drilled through broken oil sand at 1991-95 and 2002-14 feet into shale at 2015 feet and flowed about 300 barrels during the first 24 hours. Leasing activity was very brisk early last week when the Well and Guiberson producer on the Wharton-Waggoner lease, located in the southeast corner of section 99, increased its flow to 60 barrels of pipe line oil per hour shortly after being deepened for the third time to a total depth of 2017 feet. Acreage prices are unusually high, and all the close in leases are owned by independent producers. Indications are that the independents will have full control, as the major companies are not participating in the price bidding for protection leases.

The six deep dry holes forming a half circle within one mile of the South Vernon pool is largely responsible for the major companies remaining out of the drilling compaign now being launched, while the hundreds of dry holes drilled in all parts of Wilbarger County in previous years on most favorable surface structural conditions has given the county a "black eye." The performance of the completions to-date in the South Vernon pool, with three separate oil and gas sands and a fourth sand producing gas alone, indicates that the county is not yet condemned for profitable drilling. The discovery of this pool is particularly important by reason of it widening the so-called North Texas district about 15 miles to the west, while heretofore the Electra field has been considered the western boundary of the semi-shallow sand pay.

The oil produced from the 2000-foot

pay in the South Vernon pool is similar to that found in the Electra district, being above 40 gravity, and the gas tests about 2½ gallons per thousand cubic feet of gas. The sand pay is broken by thin layers of shale, and some of the completed wells have passed through three shale breaks, resulting in a noticeable increase in production without developing water trouble. The production of the six completed oil wells in the field is being run to storage tanks, or hauled from the field in tank wagons, while in the meantime a line is being strung by the Waggoner Refining Company to buy the oil for its Electra refinery. Rotary, cable and drilling machines are used in this field, and the scarcity of water is already being felt. The next completion due from the lower pay is the Dill Farm Oil Company's W. B. Dill 1, located about one-quarter of a mile northeast of production in section 84, and a string of 6⅝-inch casing was being set with a drilling machine at 1975 feet late last week. The Noble Oil Company's wildcat test on the W. T. Waggoner ranch is reported lowering 5 3/16-inch casing to test a good show of oil at 1860 feet.

Completions in Archer County are showing a steady increase each week, and 24 were reported during the past seven day period. The bulk of the new production is coming from the Swastika and Ragle fields, where considerable new territory has been proven for production lately. The Ragle pool is furnishing larger wells as the producing area is extended to the north and south, and last week a 450 barrel flowing well was obtained by Lee Wilson and associates on the Beardon Estate from 22 feet of sand pay at a total depth of 1077 feet. An offset producer brought in by the same interests swabbed and flowed 200 barrels from sand at 1066-87 feet.

A test for deep production in the Wilmot-Wilson field is being drilled by the Woodburn Oil Corporation on the L. F. Wilson ranch, and is now drilling below 2685 feet. This is known as well No. 8-A, and logged a slight show of oil and gas at 2000 feet.

Humble Oil and Refining Company's wildcat producer on the J. L. Stubblefield ranch in the east half of Throckmorton County has been placed on the pump, and is reported making 85 barrels of oil from oil sand pay at 3190-97 feet. This well is in section 991, Premium Survey, and establishes a new high gravity oil field in the North Texas district.

Believe Bowie County Oil Show Found in Blossom Sand

Texarkana, Texas, Oct. 6.—A showing of oil has been obtained from ten feet of hard sand in what is believed to be the Blossom horizon at 2280 feet in the Mission Oil Company's No. 2 Nelson, a wildcat test located in the Nancy Dycas Headright Survey, Bowie county, Texas. Drilling has been suspended, to await further orders from officials of the company.

The Boyd Oil Company (Col. Humphries) began drilling on October 1 in its Thompson wildcat, Jacob Barkman Headright Survey, Bowie county. Surface casing was set at 65 feet, and drilling is now in progress at around 380 feet. The Hooks Oil & Gas Company is drilling at around 1710 feet in its No. 1 Axom Hooks, located in the John Barkman Headright.

A showing of gas, along with a strong flow of salt water, has been reported from the Magnolia Petroleum Company's Geo. Antones wildcat, in the L. Weaver Headright Survey, Titus county. The log of the well shows salt water sand from 780 feet to 930 feet, present total depth of the well. The showing of gas was first observed while drilling below a shale break which occurred at 822 feet. The 12½-inch casing, now set at 780 feet, will be underreamed and lowered to the present depth of the well, to exclude the water.

Gulf Leasing Department Changes Follow Resignation

Fort Worth, Texas, Oct. 6.—Glen Garrett, zone agent for Gulf Production Company at Eastland, succeeds Charles R. Brown as head of the scouting and leasing department in the North Texas district with headquarters at Fort Worth following the latter's resignation effective October 1. Brown had been with the Gulf more than 12 years, having served in the Gulf Coast and Louisiana fields prior to his transfer to North Texas in 1917, and is to continue in the oil business as an independent operator. Nathan Saper, zone agent in charge of the Breckenridge office, is to succeed Garrett at Eastland, while Paul M. Buchanan is being transferred from San Angelo to become zone agent at Breckenridge.

Do Not Want Government Regulation of Oil

(Continued from Page 29)

production is now about 2,000,000 barrels per day. In 1923 almost 33 per cent of the production came from wells producing only 2.4 barrels per day, while 50 per cent came from wells producing only 4.2 barrels per day. If you make a drastic cut in the price of crude which would bring it below the cost of production you would wipe out of existence 50 per cent of the producing wells of the country because these 4.2 barrel wells and these 2.4 barrel wells could not exist on prices below production costs. If that should happen tonight, tomorrow morning at 7 o'clock crude would jump to $5 per barrel and gasoline would soar, because the supply would be cut in half. Is it any wonder that the great purchasing agencies hesitate to make great cuts. A destruction of 50 per cent of the producing wells means a great waste of capital, of valuable property and a national catastrophe."

Stating that in his opinion the problem of the men of the oil industry was the producing one and theirs the consuming one, A. B. Dougherty, attorney general of Michigan, also was one of the speakers.

D. E. Buchanan, vice-president of Chestnut and Smith Corporation of Tulsa, acted as toastmaster at the banquet. J. Burr Gibbons, president of the Tulsa Chamber of Commerce, also was presented and spoke.

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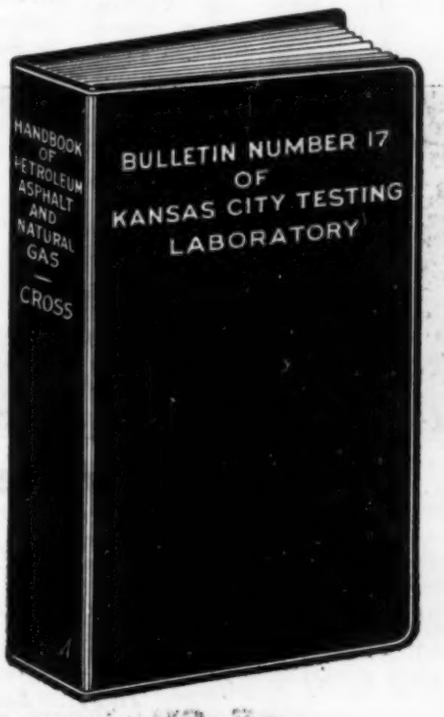

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Two Gassers Spraying Oil Extend Cotton Valley Production Quarter

Shreveport, La., Oct. 6.—The Cotton Valley field was again extended a quarter of a mile west by the completion of two gas wells, both of which spray oil in small quantities, located in the northeast quarter of section 21-21-10. S. S. Raymond's No. 1 Coyle was completed on Friday with an initial production of 15 million cubic feet of gas and a spray of oil from twenty-three feet of sand at a total depth of 2567 feet. The Invincible Oil Company's No. 2 Crichton, an offsetting well, was completed yesterday with about the same initial production from thirty feet of sand at a total depth of 2540 feet. Raymond's well was finished at a depth approximately four feet shallower than was the Invincible's well, which in turn is six feet shallower than the same company's No. 1 Lindsey, located only a little more than a half mile northeast, which still remains the only commercial oil well in the southwest extension. It came in on August 27 with an initial production of 500 barrels of oil per day, accompanied by a large volume of gas. Its oil production has shown a steady increase lately, and it is now yielding around 1500 barrels per day.

Another good gas well was added to the list of producers in the Waskom gas field by the completion last week of the Lorraine (or Wilson) Syndicate's No. 1 Bryson, located just east of the Texas-Louisiana line, in the south half of section 18-17-16 of Caddo parish. Six-inch casing was set at 940 feet, and the well was finished at a total depth of 944 feet.

The State Line Oil & Gas Company is coring in what is thought to be a cap rock at 1880 feet in its No. 1 Waterman Lumber Company, in the James Short Headright Survey, near Waskom, across the line in Harrison county, Texas. The showing of oil in Fuller & Scott's discovery well, located nearby, is logged at about this same depth.

D. C. Richardson is rigging up to begin drilling in another test to be located on the Bickham property, in section 15-18-15, of Caddo parish. The Johnson wildcat, drilled by T. C. Adams et al, in section 16-14-16, has been abandoned at 2653 feet.

The drilling campaign in the Waskom area continues to gain headway, as several new locations were made this week.

C. C. Wright et al have built a new derrick over the old Sutherland well, in section 18-12-14, which was abandoned three years ago at 2614 feet. They are making preparations to drill it deeper.

The Claiborne-Lincoln Syndicate has made a location for Fields No. 3, a wildcat, in the southeast corner of section 22-19-5, Claiborne parish. Fields Nos. 1 and 2, dry holes, were drilled by the Forrest Oil Company.

Culver et al tested salt water last week at a total depth of 2668 feet in their Culver wildcat, in section 21-14-4e, of Caldwell parish.

Price Adjustment Raises Smackover Crude Price

Shreveport, La., Oct. 6.—The Standard Oil Company of Louisiana today posted a revision of its Smackover prices for the purpose of conforming to the postings of the Louisiana Oil Refining Corporation, The Texas Pipe Line Company, and the Atlantic Oil Producing Company. The latter companies, in raising their prices applying to Smackover heavy to conform to the Standard's recent advances, eliminated from their schedule the lower gravities of Smackover light oil which, according to the Standard's posting, were worth less than heavy oil of lower gravity.

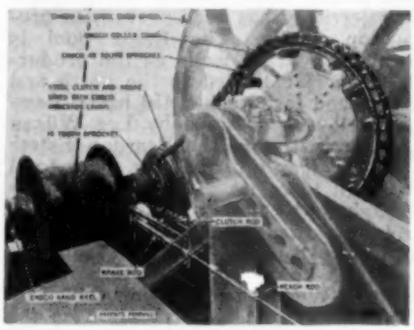
The Standard's new schedule does not exactly conform to the postings of the other companies, whose prices have been as follows: 26 and above, 95 cents; below 26, 85 cents.

The Standard's posting is as follows: 25 and above, 95 cents; below 25, 85 cents—the effect being to raise the market value of oil ranging in gravity from 25° to 25.9°. The revision has been met by the Louisiana Oil Refining Corporation, and it is assumed that the other purchasing companies will do so at once.

Chain Driven Sand Reel Put Out by Emsco Company

A chain driven sand reel, said to be giving excellent satisfaction in California fields has recently been put on the market by The Emsco Steel Products Company, 7101-7151 So Alameda Street, Los Angeles, California.

The device consists of an asbestos line friction cone clutch cast integral



Emsco Chain Driven Sand Reel

with a sixteen tooth sprocket, rotating on the sand reel shaft against ball bearings, while the clutch body has an outside asbestos-lined brake band which is connected, together with the clutch rigging, to the same operating rod and lever that previously operated the sand reel, and in the same manner.

A 1030 chain from a 48-tooth sprocket bolted on the outside of the band wheel drives the clutch.

Forward, neutral and reverse positions are provided for the attachment. The extra area of the clutch over the old friction wheel method allows the clutch to pick up and release at the slightest pressure, but it has been designed with just the right area to allow the clutch to slip before breaking a line. The brake area is sufficient to give perfect control in entering the well, and speeds of over a thousand feet per minute are actual practice.

According to advice from the company, service in the field has failed to develop a blemish in this new tool, and it has been used on several severe bailing jobs.

More detailed information will be supplied by the EMSCO Company.

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Week's Completions in East Mark Increase in Number and Production

Pittsburgh, Pa., Oct. 6.—The leading feature in the fields east of the Mississippi River during the week was the bringing in of a well by Hardman, Thomson and Miller in No. 35 on the Hazzard lease, in the Pleasant Valley District near Bolivar, New York. This well is among the flood wells of the field and showed a production of 100 barrels flush, and one of the best completions in that area for a number of years. The well showed a pay sand 23 feet in thickness, and should settle down within a few months to approximately a 10 to 15 barrel pumper.

The week in review shows a large increase in all branches of the producing game in the Eastern territory, there being a total of 170 wells completed, with 35 dry holes, 44 gas wells with a combined volume of 71,000,000 cubic feet and 91 oil producing wells with a flush of 1901 barrels. This is a nice increase over the previous week of 61 completed wells, 17 dry holes, 19 gas wells, 30,500,000 cubic feet of gas, 25 oil wells and 1169 barrels more flush production.

Pennsylvania reports an exceptionally good oil well found in Perry township, Greene County, by the Carnegie Natural Gas Company, showing for a flush of 70 barrels, and several excellent gas wells were recorded for the week in the same county. Ritchie County, West Virginia, which was noted some years ago for its nice wells, comes to the front with one of the largest found in the county for a long period. This well is on the Newbrough lease, and had a flush of 75 barrels, while in the Grant district, same county, the Adams Oil Company brought forth a 35 barrel producer.

The three distinct producing fields of Ohio, made an excellent showing, with quite a few completions and some wells above the general average of the fields. In the Southeastern Ohio district, the Pure Oil Company hit a 75 barrel flush well in the Clinton sand, in Jackson township, Muskingum County, and in York township, Morgan County, this company's No. 3 Eppley lease, produced 40 barrels, as did the Sun Company's No. 4 on the Bailey lease.

Central Ohio

Central Ohio showed much better producers than for a number of weeks back, and most of these were found in the Licking County field. The Carter Oil Company landed the two best wells for the week in this county, when No. 2 Vonderbark lease, produced 150 barrels flush, and No. 2 Sommerville lease, swabbed 103 barrels in 24 hours. The Pure Oil Company found a 60 barrel well in Hanover township, Licking County, which is an important development as the pay was found in the Trenton limestone. The top of the Trenton was found at 3480 feet and the drill passed through 900 feet of that well known formation to a total depth of 4380 feet. In the same area the Wehrle Interests drilled a well deep down in the Trenton on the Zortman lease, but failed to find the pay sand, which is very irregular in the territory where the sand lies so far below the surface. The Ohio Fuel Gas Company, after shooting its No. 5 on the Acker lease, in Medina County, got a well that showed 50 barrels flush and better than 500,000 cubic feet of gas. The premier gas well for the week was the Logan Gas Company's Walters farm well, in Litchfield township, Medina County, with a volume of 7,000,000 cubic feet from the Clinton formation.

Northwestern Ohio's best find was a wildcat drilled by the American Engineering Company in Pleasants township, Van Wert County, and some miles north of old production, the well being reported at 100 barrels flush, and should make a 40 barrel pumper.

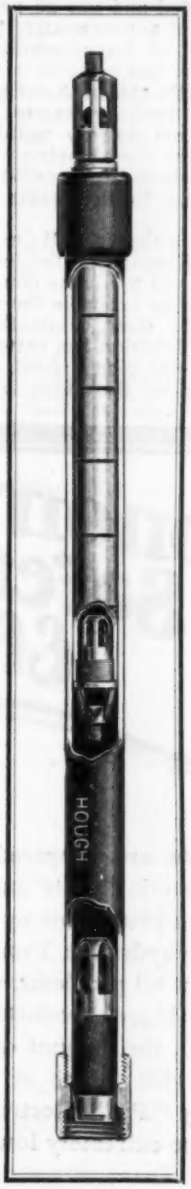
Indiana field had a couple of purely wildcat wells that add much undeveloped territory for future development, and located southeast a couple of miles from the old field in the northwestern part of Penn township, Jay county, and northeast a few miles from the Camden pool, and about half a mile away from the town of Balbec. This well was also drilled by the American Engineering Company, on the Harris lease, section 16, Penn township, and rated at 40 barrels flush, the other being Mesel Brothers', on the James Jeffries, in Bear Creek township, Jay county.

A 200-barrel flush well is the record of the Wabash field, Wabash county, Illinois, and drilled by the Arkansas Fuel Oil Company, in conjuncture with Parrotte & Hartman on the Leighty lease. This field is taking the lead in Illinois work.

Kentucky Completions Show Small Production Average; Fields Quiet

Louisville, Ky., Oct. 6.—Of 32 wells completed in the Kentucky fields during the week, 9 were failures and 23 oil wells with a continued flush production of but 266 barrels, which is a small average for the state. No large wells were brought in, the best being a 45-barrel producer found by the Union Gas & Oil Company on the J. K. Dobyne lease, in the north extension of the North Weir sand field of Lawrence county, and something like a mile or so in advance of the older producing section of the Lawrence-Johnson counties field.

This new extension is bringing about the addition of a vast area of commercial territory, that will be drilled in an active way as soon as the price of crude oil will warrant such work. Just at this time the price is at a point where the leaseholders can hardly afford to do work on account of the big cost of the wells. The wells run from 700 to 900 feet in depth, but the fact that the field is so far away from rail transportation, makes the cost of putting material on the leases very high. It costs from sixty cents to a dollar per 100 pounds to move casing and other materials from the railroads



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to the field, and the actual cost of a well drilled and put on power means an outlay of approximately $5,000. The heavy cost of transportation over the fields is the bad conditions of the road as very little can be handled in a load by either truck or wagon, hence, the extreme cost to say nothing of the freight from the shipping point to the location where it is unloaded before transporting to the leases in the oil fields.

One thing that is badly needed in the Eastern Kentucky Division is good highways and the same conditions prevail to a large extent in the central portion of the state, while the Western Kentucky Division has better roads for the moving of pipe and materials. The completion of the Mayo Trail in the Big Sandy section of Eastern Kentucky will be a big help to the operators, for as soon as this well known highway is completed, others will be macadamized from the main highway to the interior of the oil fields of these counties and then things will hum.

The two leading fields in the Big Sandy Valley of the most easterly producing section of Kentucky keeps up its development work far above expectations and the crude from the Weir sand or the Berea sands, are just as valuable as is the Pennsylvania and West Virginia crudes, and while the wells are not of the gusher kind, they maintain a good output for years to come.

Central Kentucky

In the Central Kentucky area in the Irvine field in Lee, Powell and Estill counties there is little doing at this time outside of the southern portion of Lee county, where the Petroleum Exploration Company, Carter Oil Company, Hupp, Duff & Company, The Petroleum Company, Superior Oil Corporation, Black Gum Oil Company, and others are maintaining their development work to some extent, but only drilling wells to protect lease conditions.

Cumberland county, which has been showing the larger producers during the past few months and located along the Tennessee line in the central south portion of Kentucky, is getting more quiet, owing to crude prices and bad roads. When the freshet comes and the waters of the Cumberland river is in high tide, much material is usually towed by barges to Burksville, which is the headquarters of the oil contingency for this field. There are several producing sands within the borders of the county and some are very rich as wells drilled in sands less than 250 feet deep have produced 1500 barrels flush, and now the goal of the operator is the sands found below the Pencil Cave and also below the two known Sunnybrook sands, which are similar to the Trenton Limestone formation. In fact it is the well-known Trenton like that which furnished so many gushers back in the days from 1885 to along about 1907, when the newer wells showed the heavy drain that had been made in the previous 22 years.

In the Western Kentucky Division operators are slowing down work for practically the same cause as those in the more eastern part of the state, the low price of crude. To realize on their investments in operating the territory of Warren, Allen, Barren, Simpson and other counties in that division the crude must bring a price not less than two dollars per barrel.

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California Refineries Run 404,374 Barrels Crude Day

Los Angeles, Calif., Oct. 5.—During the month of August, 35 California refineries reported to the Bureau of Mines, indicating they had operated at 74 per cent capacity during the month, running to stills a daily average of 404,374 barrels of crude. During August refineries ran to stills 12,535,584 barrels of crude oil, 959,341 barrels of unfinished oils and 182,327 barrels of natural gasoline used in blending.

Production of gasoline showed an increase of 6,213,199 gallons during August over July, while stocks of gasoline decreased 15,584,243 gallons to a total storage of 245,834,954 gallons. This indicates that there is in storage in California sufficient gasoline for consumption including shipments to last two and half months, if all plants were closed down.

During August, production of fuel oil and gas oils amounted to 381,271,491 gallons, an increase of 15,836,516 gallons over the month of July, but during August stocks decreased 17,372,533 gallons to total storage of 786,787,819 gallons.

Lube production was 8,599,182 gallons, a decrease when compared with July, but stocks remained practically unchanged.

Completions for Past Week in U. S. Fields

Summarized Review of Field Results

State—	Completions This Week	Completions Last Week	Producers This Week	Producers Last Week	Gas Wells This Week	Gas Wells Last Week	Failures This Week	Failures Last Week	Initial Production This Week	Initial Production Last Week
Oklahoma	55	94	33	67	3	4	19	23	18,214	31,738
Kansas	5	15	3	13	..	..	2	2	872	2,498
Texas	66	71	46	42	1	..	19	29	7,325	12,885
Arkansas	19	15	14	14	1	..	4	1	1,205	1,765
Louisiana	12	7	3	3	6	3	3	1	205	485
Eastern States	168	103	89	59	48	27	31	17	655	732
California	30	26	30	26	..	..	..	..	13,760	7,935
Total	355	331	218	224	59	34	78	73	42,236	58,039

Note—Following is the explanation of abbreviations, signs, etc., used in completion and wildcat reports: *—dry hole, abandoned well; ‡—salt water; †—junked and abandoned; ¶—million cubic feet of gas; abn—abandoned; bbls—barrels; b. s.—basic sediment; cas—casing; co—cleaning out; dk—derrick; dr—drilling; fsh—fishing; ft—feet; in—inches; lcn—location; m—milling; N. S. E. W.—North, South, East, West; r—reaming; sd—shut down; sdtr—sidetracking; sp—spudded; sr—straight reaming; std—standardizing; sw—salt water; td—total depth; ur—under reaming; wo—workover; wosr—waiting on standard rig.

Texas

MEXIA

Company, Well and Location	Initial Production Bbls.	Depth
Pure Oil Co. W. B. Kendricks S-2..	150	3030

IOWA PARK AND K-M-A

Allen & O'Donohoe Kemp & Allen 2	40	1170
Roy I. Carter et al W. L. Hodges 1	*	1810
Electra Gulf Oil Co. W. W. Overby 1	*	1822
Murray 7	85	1660
Hill & Roberts W. W. Overby 9..	80	1664
H. Lee et al S. H. McCarty 4....	65	1225
Petroleum Producers Oil Co. Allen & Kemp 2	20	1170
Newt Maer 9	65	1665
Robertson et al S. H. McCarty 1...	40	1701
Stump Oil & Gas Co. Keuhn 1....	*	1863

YOUNG COUNTY

Fred B. Foster & Co. Mahaney 2..	*	3885

EASTLAND-RANGER

Turner et al Jones 3	80	3393

STEPHENS COUNTY

Rochelle et al W. A. Sweeney 2-A..	80	3300
Seaboard Oil & Gas Co. E. J. McCleskey 1	¶4	3580

ARCHER COUNTY

Roy I. Carter et al J. H. White 4-E	105	1605
C. H. Clark & Harbin L. Echols 1..	100	1338
Everett & Co. J. B. Miller 1	*	1650
Fuller-Owens & Wrights W. N. Miller 1	15	840
W. N. Miller 2	5	885
W. B. White 1	*	870
W. H. Godfrey et al J. H. White 1..	*	1765
Griswold Oil Corp. W. L. Andrews 1	*	1446
Hobbs-Burleson & Chenault J. C. King 1	*	1500
Holmes & Haskell Wilson 1	*	1435
Kentucky Oil Corp. et al W. F. Parrish 2-C	125	1600
Lowery & Cavin W. Harbinson 3..	100	1335
Melat & Graham Goldsmith 1	80	1359
D. B. Read et al Andrews 5	*	1023
Riner & Bailey L. F. Wilson 21-B..	300	1612
R-F Oil Corp. A. P. Nichols 6	250	1714
Shamrock Oil Co. G. M. Boren 1 ..	210	1079
J. T. Richardson 4-C	115	1305
Richardson-Goldsmith 12	100	1354
Richardson-Goldsmith 13	100	1344
Tex-O-Kan Oil Co. J. H. White 4..	45	1600
Lee Wilson et al Beardon Heirs 1..	200	1087
Beardon Heirs 2	450	1077
Young et al A. J. DeMoss 1	*	1515

ELECTRA

Burnett Ranch Oil Co. Burnett Estate 8	45	1795
Magnolia Petroleum Co. Waggoner Bros. 7	*	1660
Texhoma & Perkins Burnett Estate 3-A	35	1815

GULF COAST

Company, Well and Location	Initial Production Bbls.	Depth
Pierce Junction—		
Gulf Prod. Co.'s No. 16 Taylor....	*	4050
Goose Creek—		
Gulf Prod. Co.'s No. 2 San Jacinto Bay State	150	3200
No. 11 Ashbel Smith (wo)	300	1500
Hull		
Gulf Prod. Co.'s No. 15 Hannah Fee	*	4000
Spindle Top—		
Gulf Prod. Co.'s No. 149 Gladys (wo)	250	850
Saratoga—		
The Sun Co.'s No. 172 Brice	5	700
Batson—		
S. R. Buchanan's No. 78 Millhome...	12	1260
Deutser Oil Company's No. 10 Trustee (wo)	5	1125
Thibedeaux & Cavitt's No. 1 King...	125	1110
East Batson Oil Co.'s No. 4 Conzulman	6	750
Paraffine Oil Co.'s No. 58 Paraffine	9	360
Sour Lake—		
Earl C. Hankhamer's No. 1 Brown..	15	925
West Columbia—		
The Sun Co.'s No. 3 Robertson (wo)	*	2855

SOUTH LOUISIANA

Vinton—		
Marrs McLean's No. 7 Gray (wo)..	25	2940
Edgerly Pet. Co.'s No. 1 Gray "B"..	*	4050
Evangeline—		
F. I. Getty's No. 2 Clement (wo)....	175	2350
Richland—		
Atlantic Oil and Prod. Co.'s No. 5 Swink	1000	2975
G. I. Moore's No. 1 Bledsoe	*	3225
W. B. Tucker & Fox's No. 7 Davis.	1000	2970
No. 8 Davis	1000	2950

POWELL

Pure Oil Company's No. 12 Kent 44 acres	*	500
U. S. Tex Oil Corporation's No. 2 Ramsey "A"	15	1600

Louisiana

Bellevue Field—		
Wetherbee et al's Fee E-7, 27-19-11	5	323
Cotton Valley Field—		
Invincible Oil Co.'s Crichton 2, 21-21-10	¶15-20	2540
S. S. Raymond et al's Coyle 1, 21-21-10	¶15-20	2567
Total, 2 wells	¶30-40	
Monroe Gas Field—		
LaDel et al's Fee 26, 16-19-5e, Ouachita Parish	¶11	2193
Montgomery et al's Fee 1, 6-19-5e, Ouachita Parish	¶34	....
Pelican Gas Co.'s Shell 1, 18-10-5e..	¶2	2225
Total, 3 wells	¶47	
Waskom Gas Field—		
Wilson Synd.'s (Lorrain Synd.) Bryson 1, 18-17-16, Caddo Parish	¶22	944

Arkansas

Company, Well and Location	Initial Production Bbls.	Depth
Stephens Field—		
Magnolia Pet. Co.'s Watson 1, 36-15-20, Columbia County	25	2153
Smackover Field, Ouachita County—		
Atlantic Oil Prod. Co.'s Jeffus 2, 25-15-17	75	2331
Gilliland Oil Co.'s McRae 7, 25-15-17	30	2296
Wells S-5, 25-15-17	30	2293
Green et al's LaGrone 1, 30-15-16..	25	2282
Hazen et al's Fincher 3, 29-15-16....	20	2258
Herman & Jackson's Shirey 1, 36-15-17	40	2305
Invader Oil Co.'s Hardin 1, 28-15-16	175	2318
Stumpff & Todd's LaGrone 3, 30-15-16	20	2283
Smackover Field, Union County—		
Arknasas Fuel Oil Co.'s J. E. Murphy 2, 8-16-16	100	2298
Coker Drilling Co.'s Thornton 1, 14-16-16	*	1977
Estes et al's Neeley 1, 1-16-17	40	2264
Leonard et al's Pendleton 1, 21-19-15	¶1	2156
Lyall et al's Fee 5, 3-16-15	300	1975
McFarland et al's Graves 4, 3-16-15	200	1984
Packard et al's Fox 1, 21-16-15	125	2060
Total, 15 wells	¶1-1180	

Oklahoma

Burbank—		
Texas-Co. No. 2, C S L SW SE NW 19-27-6	280	2977
Phillips Pet. Co.'s No. 4, SEc NW NW 18-27-5	100	2994
No. 3, C S L SW SE NE 18-27-6	120	2993
No. 1, SWc NE 14-27-5	75	3040
No. 5, C W L NW SW NE 14-27-5	250	3042
No. 6, C NE SW NE 14-27-5	125	3050
Carter Oil Co.'s Lyman 8, C SE NW NW 11-27-5	1025	3012
Lyman 6, C W L SW NW NW 11-27-5	900	3000
No. 7, C NE SW NW 13-27-5	250	3011
No. 4, SEc NW 13-27-5	160	3019
No. 1, SWc NW 13-27-5	360	3015
Cosden Oil & Gas Co.'s No. 5, C S L SW SW NE 17-26-6	500	2957
Carter Oil Co.'s No. 16, SEc SW 16-26-6	600	2907
Carter County—		
Amerada Pet. Corp.'s No. 16, NEc SW NE 20-5s-1e	270	2705
No. 4, SEc NW NE 20-5s-1e	105	1761
Creek County—		
Burke-Greis Oil Co.'s Barnett 3, NEc SE NE 31-14-10	447	3432
H. C. Wilson's No. 1, C E L NE SE NW 4-14-10	60	3266
No. 1 Asbury SEc NE 1-15-10	10	2700
Roxana Pet Corp.'s No. 1, SWc SE NW 7-14-7	800	4180
Sapulpa Fuel Co.'s Smith 2, NEc SE 30-18-10	*	2980

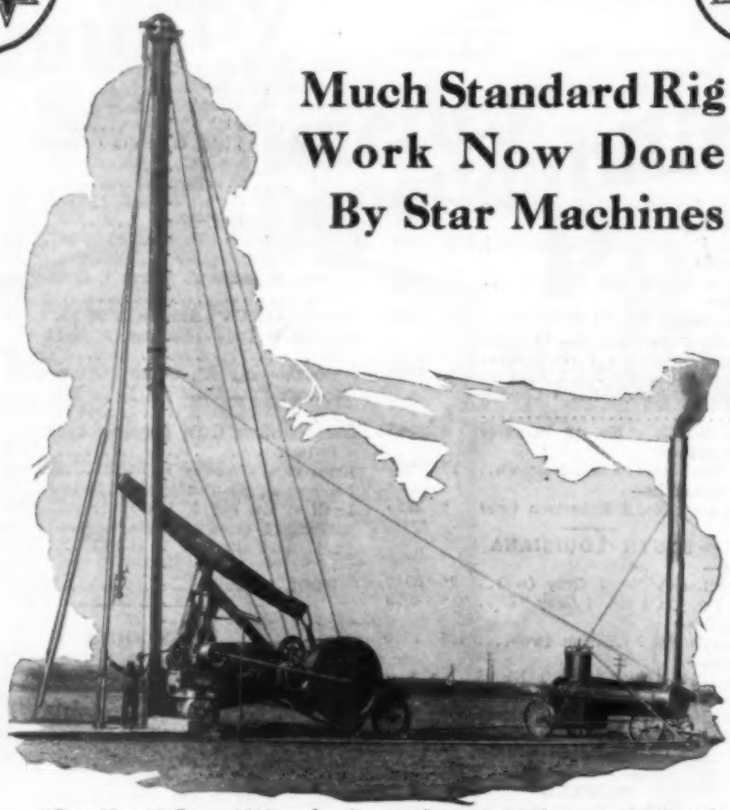
Company, Well and Location	Initial Production Bbls.	Depth
Oklahoma P. & R. Corp.'s Colbert 1, C S L SE NE 30-18-10	*	3096
Darby Pet. Co.'s No. 1, NEc 13-19-10	*	2650
Cotton County—		
G. C. Woods et al's No. 1, SEc SW SE 22-5s-12w	*	2501
Steve Linson's No. 2, C NE NE NW 14-2s-11w	¶	1998
Garfield County—		
Imo O. & G. Co.'s No. 1, NEc NW SW 31-22-3w	38	2192
Garvin County—		
Magnolia Pet. Co.'s No. 4, C NE NW SE 16-1n-3w	15	1670
Hughes County—		
Independent O. & G. Co.'s Brown 1, C SE SW NE 18-9-9	¶	3432
White Eagle Oil & Refining Co.'s Brown 1, C SE SE SW 8-9-9	*	3477
Sinclair O. & R. Co.'s Willis 1, C NE NE SE 5-9-9	*	3375
Skelly Oil Co.'s Carter 1, C SW SW NW 4-9-9	710	3338
Cosden O. & G. Co.'s Alexander 6, C SE NE NW 3-9-9	350	3306
Jefferson County—		
United Oil Co.'s Merriman 1, C N L NW SW NW 36-5s-6e	*	2320
Patterson & Hoffman's Stark 1, NEc SW 34-6s-7e	*	7005
Kay County—		
Amerada Pet. Corp.'s Woods 33, SEc SW NE 32-25-1w	3200	4030
Marland Ref. Co.'s Vandever 1, NWc 21-27-1w	*	3662
Kiowa County—		
Sun Ray Aubyme's No. 1, SEc 33-8n-18w	*	2184
Conner et al's 2, C N L NW 34-7n-16w	*	1548
Lincoln County—		
Wheeler & Webb's No. 1, lat 8, blk 3, C W½ NE NW 12-14-6	360	4178
Noble County—		
Tidal-Osage Oil Co.'s No. 1, NEc 11-23-2w	*	2863
Comar Oil Co.'s No. 1, SEc NE NE 3-24-1w	1823	4263
Okmulgee County—		
Logan & Wallace's Marton 5, SEc SW NE 8-13-12	*	2401
Osage County—		
Hayes & Robert's Ladd 6, C E L SW SW 17-25-9	*	2640
Marland Ref. Co.'s No. 1, NWc SW 34-25-8	*	2875
Henderson & Holden's No. 4, C SE 10-25-8	*	2396
City of Pawhuska's No. 10, C E ½ SW 26-26-8	¶	1191
Pawnee County—		
Mutual Oil Co.'s No. 1, C N L SW 34-23-8	*	2871
Cosden O. & G. Co.'s Schoolland's 3, NWc SW NW 16-25-7	277	2640
Jno. Markham's Clark 1, SWc 9-20-7	50	2627
Seminole County—		
Carter Oil Co.'s Yale 1, C NE SE NE 22-10-8	*	1610
Berry Pet. Co.'s Yarhola 3, C SE NW NE 22-10-8	*	2510
Independent O. & G. Co.'s Harjo 3, C NE SW NE 21-10-8	85	3556
Superior Oil Co.'s Baker 3, C NW NE NW 21-10-8	2160	3421
McMann Oil Co.'s Baker 1, C NE SE SW 16-10-8	2531	3477
Gilliland Oil Co.'s Proctor 7, C NW SW NE 16-10-8	103	3555
Pure Oil Co.'s No. 4, C SE SW SE 9-10-8	75	3479

Kansas

Cowley County—		
Southwestern Pet. Co.'s Eastman 8, SW SE NE 6-31-6	125	2888
Empire O. & G. Co.'s Eastman 1, NEc NW 6-31-6	677	2872
Greenwood County—		
H. Hoover et al's Hoover 1, SEc NW 29-24-9	*	2902
Franklin Oil Co.'s Dalton 14, C S L SE SE 11-24-12	*	720
Skelly Oil Co.'s Johnson 2, SEc NE SE 15-24-12	70	1770

California

Torrance—		
C. C. M. Oil Co.'s Delamo 22	135	3638
Torrance 63	650	3695
Torrance 59	185	3700
Torrance 69	50	3730
Standard's Torrance Com. 3	120	3605
Sentinel Joughlin 13	485	3845
Petroleum Midway's Gillman 2	190	3680
Petroleum Securities' Kleinmeyer A5	250	3805
Kleinmeyer A4	250	3820
Fullerton Oil Co.'s Barlow 2	100	3600
Cotton fee 5	175	3750
Shell Co.'s Scarborough 7	35	3850
Long Beach—		
Federal Drilling Co.'s Lerden 1	200	4400
Petroleum Midway's Fields 7A	60	4563
Davis & McMillan's Bloom 9	500	4857
Shell Co.'s Nesa 6	1950	4735
Cooseboom 5	50	5000
Hawkeye 1	250	4430
Petroleum Midway's Gish 4	25	3500
Huntington Beach—		
Standard's A23	65	4428
So. Calif. Dr. Co.'s Riggle 1	260	3269
Rosecrans—		
General Pet.'s Vaughn 1	1000	4752
Dominguez—		
Shell Co.'s Reyes 11	4500	4223
Inglewood—		
Standard's No. 1-1	175	2134
Midway—		
Pacific Oil's No. 10, sec 19-31-24	1000	3770
No. 11, 19-31-24	100	3760
Combined Oil Co.'s No. 16, 14-31-22	20	1350
North American's No. 10, 30-31-24	800	3650
Sunset—		
Associated Oil's 22-81	60	3300
35-32	100	3250
Calitroleum's No. 3, 4-11-23	20	3692



Much Standard Rig Work Now Done By Star Machines

"Our No. 27 Star, 1918 make, is running as steady as a clock and doing the work of a big standard rig at 2700 feet in a very hard formation.

"Twice recently we have had to fish out two entire strings of tools—sending down the third to get them out. The tools we are using are all heavy standard tools—one 10-foot solid Reamer weighing over a ton.

"Many standard rig men who have visited us and looked over our outfit were astonished at what this machine was doing in this hard lime and flint formation."

(Signed) B. A. ATKINSON,
Spring Creek and Luckey, Oklahoma.

More and more oil men are making the discovery that Star machines are practical and economical for the deeper drilling. They are finding that Stars can easily handle jobs they once thought required a standard rig.

THE STAR DRILLING MACHINE CO.

Akron, Ohio

Branches at Chanute, Kansas; Long Beach, Calif.; Portland, Oregon
Export Offices: 2 Rector St., New York City, U. S. A.

Sturdy Base Makes Pump Power Efficient

Continuous operation and no vibration shows value of heavy foundation under machinery

By A. R. McTee

AMONG the most up-to-date pumping powers in coastal fields is one belonging to the Southern Petroleum Company, on its lease at Humble. Although this power has been in operation since April only, it has made an exceptional record. In spite of the fact that all the machinery was new, few adjustments have had to be made and the only stops have been for inspection purposes.

The outfit was put into operation on April 17 and run for 24 hours. A few minor adjustments were then made and the power started again. It ran for 26 days straight without any difficulty. At the end of that time an inspection was made to ascertain whether all the parts were operating as they should. Nothing was found out of order, and the plant was put to work again and ran until August 5 when another inspection was made. Since that time no shut-down has been necessary and at the present time the outfit is pumping 13 wells, the total output of which amounts to about 100 barrels daily.

Elimination of vibration has been accomplished in this power by unusually deep foundations for all machinery. Due to the character of the soil under the plant, precautions were taken and all foundations were enlarged beyond original specifications. After nearly six months of operation there is not enough vibration in the engine or the power to prevent a fifty-cent piece from standing on edge on either the power or the engine. Those who designed the plant and built it declare that there is little likelihood of vibration ever becoming a menace in this power.

Original plans for the foundation of the power, a 24-foot one supplied by The National Supply Company, called for concrete five feet deep and 10 feet square. This was enlarged by two feet both in the length and breadth. The depth was not changed. This makes the concrete block under the power five feet by twelve by twelve.

The oil engine base was enlarged in both the length and breadth, making the foundation five feet deep by 12 feet by 16 feet.

A 65 horsepower Superior Crude Oil Engine furnishes power to do the pumping. Guards are built around the engine to insure safety to workmen about the plant.

Concrete supports for the line shaft are five feet deep in the ground and the four supports are tied together with concrete laid two feet deep. This insures an absolutely steady foundation for the line shaft thereby preventing vibration which causes loosening of fixtures that throws the whole power out of line.

An auxiliary Ajax steam engine is set on a concrete block three feet by five by 14. A field boiler located just outside the power building can be used to supply steam for the Ajax in case the oil engine gets out of order, and this boiler is also near enough for the man in charge of the power to fire the boiler when nearby wells are being worked over.

The power building is 30 feet by 100 feet, and the equipment is so arranged that nothing is crowded. Three big doors and several windows furnish plenty of light and ventilation.

A small compressor to furnish air for starting the engine is operated by a small gasoline engine.

Lights are provided by a generator run by the big engine.

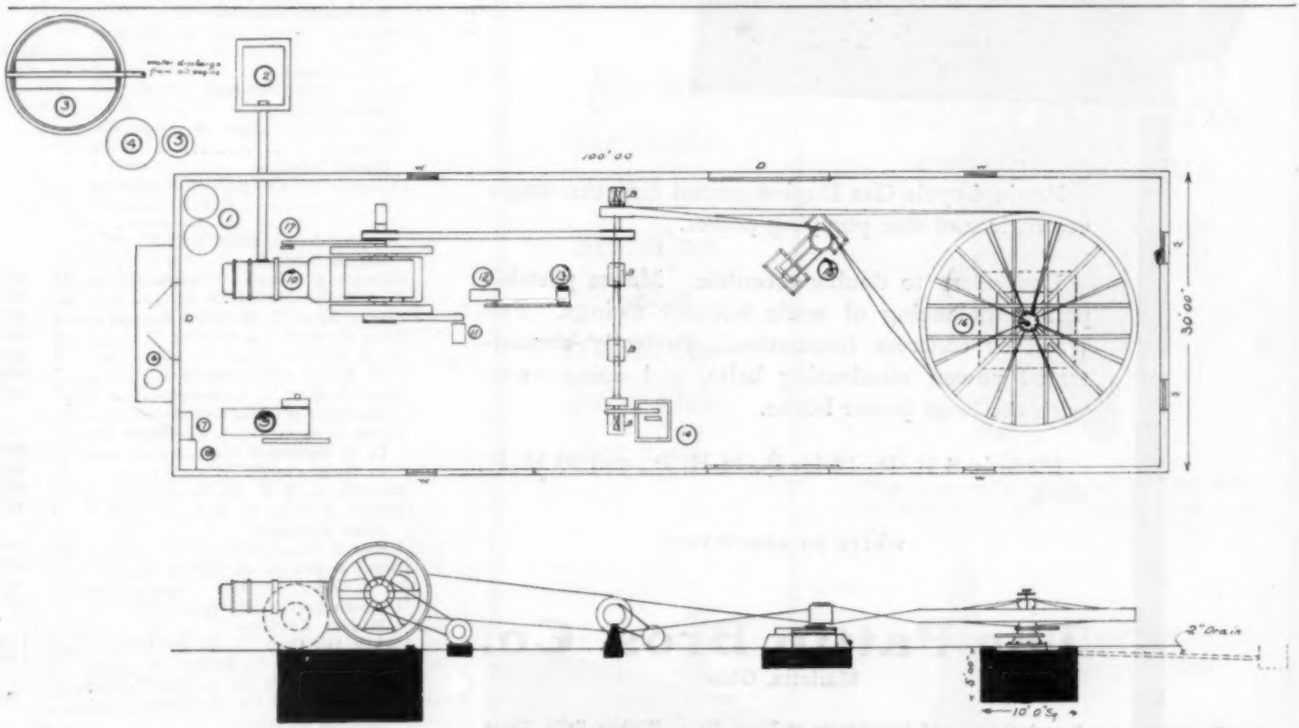
A small rotary pump is located so that it can be run from the line shaft.

A foundation two feet deep is used under the belt tightener.

All foundations used in the power are heavily reinforced.

A two-inch concrete floor is used in the building. Behind the power the floor slopes to provide drainage.

Galvanized iron is used in the building for the walls and roof.



—Sketched by Robert Y. Eden, Field Engineer and Service Man, National Supply Company.

Floor plan for model power with elevation for engine, line-shaft and belt-tightener.

LEGEND

1 Air tank.
2 Exhaust pit.
3 Circulating water tank and cooler.
4 Fuel oil settling tank.
5 Fuel tank.
6 Lubricating oil filter.
7 Desk.
8 Locker.
9 Stand-by steam engine.
10 65 H.P. Superior Crude Oil Engine.
11 Generator.
12 Air-compressor engine.
13 Air-compressor.
14 Rotary Pump.
15 Idler.
16 24-ft. National Band-wheel Pumping Power.
17 Circulating pump.

W—Windows. D—Doors. B—Bearings. L.S.—Line-shaft.

Eastern States

PENNSYLVANIA

Company, Well and Location	Initial Production Bbls.	Depth
Greene County—		
Carnegie Natural Gas Co. A. Henderson 1	70	....
T. Stewart	¶2	....
Philadelphia Oil Co. E. Lemley 1..	5	....
Fordyce Heirs 1	¶1½	....
Orndoff & McCracken J. McCleland 1	¶2	....
Waynesburg Home Gas Co. A. Muckle 1	¶2	....
Stockdale O. & G. Co. K. Stockdale 2	¶2	....
P. R. Laughlin J. Swearinger 1....	*	....
Dunbar O. & G. Co. M. S. Hostattler 1	*	....
Allegheny County—		
Puckerton & Co. Hillman 1	¶1	....
Hahn & Co. Hahn 1	¶1	....
Fisk & Co. Heil 2	¶2	....
Eldred Field—		
Turner, Carryer & Dillie Shawmut 1	8	....

NEW YORK

Bolivar Field—		
Hindeman, Thompson & Miller Hazzard 35	100	....
A. L. Shaner Greenely 1	12	....
Kossuth Field—		
A. L. Shaner Richardson 1	10	....

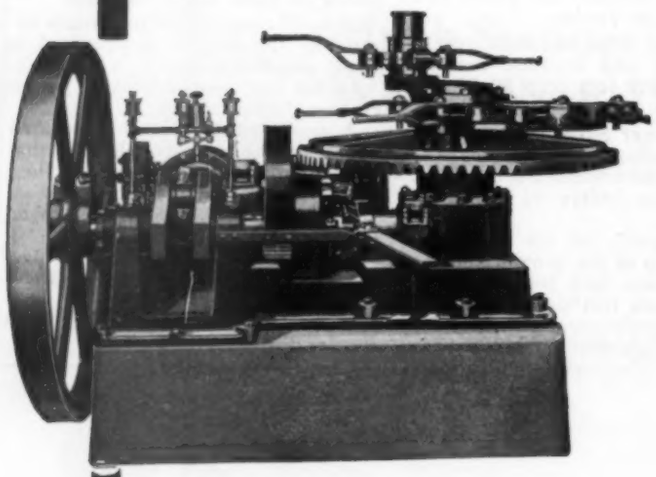
WEST VIRGINIA

Ritchie County—		
Goose Creek Oil Co. J. Newbrough 1	75	....
Adams Oil Co. James Newbrough 4	35	....
Hope Natural Gas Co. W. Wass 1...	¶12	....
Loudin & Co. J. O. Nay 4	¶1½	....
Hays & Roberts Lawrence 4	¶¼	....
Pittsburg & West Virginia Gas Co. Okey Nutter 1	*	....
Lincoln County—		
Columbia Gas & Electric Co. Seth Miller 1	¶¼	....
Roy O. & G. Co. Barrett 1	¶1¼	....
Foote O. & G. Co. G. Ray 1	¶1	....
Aetna O. & G. Co. Fred Carter 1..	¶2	....
Roane County—		
United Fuel Gas Co. W. J. Justice 1	¶2½	....
R. Samples 1	¶2½	....
C. E. Morris 1	¶2	....
Godfrey L. Cabot W. Simmons 5...	¶¼	....
Tyler County—		
Hope Construction & Ref. Co. S. T. Meredith 1	20	....
G. J. Morgan E. Brooks 1	1	....
Unknown, Unknown Parties 1	1	....
Calhoun County—		
Hope Natural Gas Co. R. G. Lynn 1	¶2	....
A. Bennett 1	¶2	....
G. F. Davis 1	¶1½	....
Nicholas County—		
Hamilton O. & G. Co. Unknown 1..	¶1	....
Unkown 2	¶1	....
Unknown 3	¶1	....
Kanawha County—		
United Fuel Gas Co. A. J. Hineman 1	¶1	....
S. P. Young 1	¶2½	....
Stanton & Co. S. W. Young 3	*	....
Wood County—		
Hoagland Oil Co. C. W. Lawer 1..	4	....
Henderson Oil Co. Straud Heirs 3..	5	....
Boone County—		
Owens Bottle Mach. Co. T. W. Bedford 5	¶1	....
Alice Hall 1	¶½	....
Lewis County—		
Mud Lick Run O. & G. Co. M. Gillan 1	¶½	....
McColl O. & G. Co. Maud Gillan 1	¶2	....
Harrison County—		
Arzpurian Oil Co. L. Stout 2	¶2	....
Bridgeport O. & G. Co. S. S. Farris 1	¶2	....
Braxton County—		
Pittsburg & W. Va. Gas Co. P. H. Vancoy 1	¶¼	....
West Virginia Central Gas Co. C. F. Engle 1	¶3	....
Monongalia County—		
Carnegie Natural Gas Co. N. A. Moore 1	5	3135
Wirt County—		
Roberts Bros. Rathbone 135	5	....
Wetzel County—		
Manufacturers Light & Heat Co. Ullom 3	¶3	....
Gilmer County—		
Chartiers Oil Co. Baptist Missionary 2	¶2	....

KENTUCKY

Barren County—		
Gillespie & Wiggins Wiggins 5	13	522
Fred Moore McCubbin 5	12	544
Ziegler Bros. T. Mansfield 3	8	527
Elem O. & G. Co. Warder 11	4	530
W. R. Jackson Creek 2	*	634
J. C. S. Oil Corp. Steffey 3	*	480
Amos & Bare R. Summers 1	*	646
Lawrence-Johnson Counties—		
Union G. & O. Co. J. K. Doyne 2..	45	799
L. E. Sparks 1	20	800
L. E. Sparks 2	20	802
Fearless O. & G. Co. D. Williams 3	7	837
George & Toms M. & L. Franklin 4	1	900
Allen County—		
Cutler & Co. J. Straight 1	25	402
Berry & Co. V. R. Hinton 2	10	290
H. A. Kiser Ayres 15	4	412
Unkown Parties Reeves 1	5	300
Warren County—		
White Oil Corp., J. T. Scott 10	5	1024
Wood Oil Co. O. Grimes 5	4	1141
H. W. Ennis & Co. V. Potter 2	2	1172
Green Star Oil Co. H. Carver 1	*	560
Monroe County—		
Unknown Parties Kidwell 1	*	800
H. A. Kiser Emberton 1	*	900
Unknown Parties Ross 1	*	700
Lee County—		
Hupp, Duff & Co. G. W. Porter 2..	27	1397
E. McCooum 1	5	1403
Johnson-Magoffin Counties—		
Petroleum Exploration Co. W. H. Collins 5	7	903

Patent applied for



Pattin 4-cycle Gas Engine geared direct to single eccentric and disc pumping power.

Equivalent to double eccentric. Makes possible perfect balancing of wells without swings. For wood or concrete foundation. Perfectly concentrated power, eliminating belts, and doing away with the large power house.

Made in 8 H. P., 12 H. P., 15 H. P., and 20 H. P. sizes.

WRITE US ABOUT THIS

The Pattin Bros. Co.

Marietta, Ohio

Branch Offices and Warehouses at Tulsa, Okla., Wichita Falls, Texas. Carried in stock by Frick & Lindsay Co. in Kentucky.

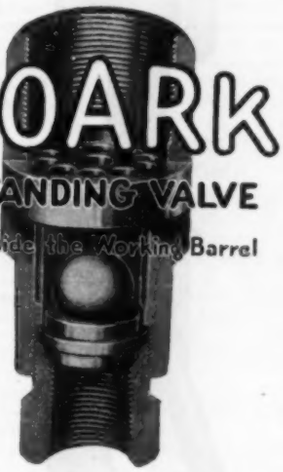
"PATTIN POWER"

Company, Well and Location	Initial Production Bbls.	Depth
Sepple & Co. Julia Salyer 1	10	1100
Elliott County—		
Campbell & Wheeler J. F. Dials 2	12	1310
C. J. Sipple R. Mason 1	*	1312
Owensboro District—		
B. Thompson Barlow 1	5	740
Randolph & Stevenson Collis & Higdon 1	*	815
Owsley County—		
Combs Bros. Dev. Co. Judd 1	15	1346
SOUTHEASTERN OHIO		
Washington County—		
Harris & Co. Rose Edwards 1	20	....
Earl Stephens C. O. Troutman 1	5	....
L. Goldish & Co. J. Berger 7	2	....
Brown & Valentine M. Matheney 1	2	....
Luckey Oil Co. Devol Bros. 7	2	....
Otto Becker & Co. Rosenbush 7	2	....
Muskingum County—		
Pure Oil Co. J. A. Ashcraft 2	75	....
Mideast Oil Co. M. J. Wildman 1	¶1	....
Morgan County—		
Pure Oil Co. Wm. Eppley 3	40	....
The Sun Co. Grant Bailey 4	40	....
Meigs County—		
Ohio Fuel Supply Co. C. W. Cornell 2	2	....
Brocalsa Chemical Co. A. B. Cross 2	10	....
Noble County—		
J. O. Miller & Co. O. H. Dillehay 9	*	500
CENTRAL OHIO		
Licking County—		
Carter Oil Co. J. Vonderbark 2	150	....
J. Sommerville 2	103	....
Pure Oil Co. Ilena Smith 1	60	4380
Russ & Earley Ann Smith 1	3	....
Spindler & Donaldson C. A. Bounds 8	4	....
Wehrle Interests J. Zortman 1	*	4400
Central Ohio Gas Co. E. Richter 1	*	....
Wayne County—		
Ohio Fuel Gas Co. S. J. Hatzler 1	15	....
Arthur & Mills E. Miller 1	¶½	....
Logan Gas Co. L. E. Wiles 2	¶¼	....
T. A. Armstrong 3	*	....
Medina County—		
Logan Gas Co. Frank Walter 2	¶7	....
Jane Smith 1	¶¼	....
Ohio Fuel Gas Co. G. Acker 5	50	....
Athens County—		
Ohio Fuel Supply Co. T. Bond 2	¶1	....
Stephens & Yowman C. S. Parker 1	¶¼	....
Shady River O. & G. Co. F. W. Chapman 9	*	....
Knox County—		
East Ohio Gas Co. W. Bailes 2	*	....
Cline Bros. F. Veatch 1	5	....
Perry County—		
Logan Gas Co. L. Jourdon 1	*	....
Flint Ridge O. & G. Co. A. Berger 1	¶1½	....
Lorain County—		
Ohio Fuel Gas Co. C. Schwartz 1	*	....
Burton, Morgan & Stephens W. Stelzer 1	*	....
Hocking County—		
Preston Oil Co. D. E. Sadler 1	15	....
Ashland County—		
Logan Gas Co. E. McBride 1	¶2	....
Holmes County—		
East Ohio Gas Co. Gil Johnson 3	*	....
NORTHWESTERN OHIO		
Ottawa County—		
E. L. Luckey Luckey 3	16	1318
G. Magseig & Sons J. D. Smith 5	15	1304
River Oil Co. Mrs. S. Netcher 3	10	1312
Zorn-Hornung Oil Co. E. Yeasting 10	8	1335
Mercer County—		
E. G. & J. Henderson J. Schmidtz 1	17	1152
Deffenbaugh & Co. A. Abel 3	15	1155
Logan Oil Co. G. Breymier 3	2	1204
Fort Wayne Oil Co. Hays 1	*	1250
Van Wert County—		
American Engineering Co. Hofman 1	100	1234
Bolyard, Barnett & Co. German 1	40	1235
Cal. Neely & Co. Moore 1	4	1265
Hancock County—		
D. Kirk & Co. Levi Gorby 6	30	1317
B. Porter & Co. N. Powell 8	20	1322
Darke County—		
Mondarke O. & G. Co. Patton 11	20	1260
L. A. Watson & Co. J. Watrin 1	4	1245
Wood County—		
Zeising & Co. E. Brendt 5	10	1312
Onsel Bros. Drilling Co. Moore 1	3	1317
Shelby County—		
Eilerman Oil Co. Eilerman 3	15	1309
Allen County—		
W. O. Huntley A. Handle 1	3	1331
Hardin County—		
Allie Moore Oil Co. Carnes 1	¶2	1420
Auglaize County—		
Davidson & Co. N. Fogt 1	*	1365
INDIANA		
Jay County—		
Mesel & Spencer J. Jeffries 2	40	1110
Mesel Bros. Whiteman 4	10	1104
Amer. Engineering Co. C. C. Harris 1	40	1100
C. Davenport 1	5	1134
Randolph County—		
T. O. Tharp W. Cline 1	*	....
Grant County—		
J. Wides & Co. A. Moorman 5	*	....
Wells County—		
Hartford O. & G. Co. S. Griffith 1	*	....
ILLINOIS		
Wabash County—		
Arkansas Fuel Oil Co. & Co. E. Leighty 1	200	1570
J. T. Smith 1	5	1543
J. Mullineaux 1	7	1559
B. F. Price 1	5	1605
S. Newsom 1	5	1580
Joseph S. Young Jr. & Co. John Leek 2	6	1465
Black Gold Oil Co. J. T. Smith 2	*	1580
Crawford County—		
Kewanee O. & G. Co. J. Wright 37	1	492
J. Wright 38	4	500
Schregongest & Karnes Lamb 5	3	980
Clark County—		
Gillette & Co. H. Echard 2	*	460
Ohio Oil Co. Z. E. Brant 16	*	1969
Edgar County—		
L. C. Hood & Co. J. Sallee 2	*	461

Maybe the Right Kind of Standing Valve Would Reduce This for You

Scientific study has shown that WITH ONE EXCEPTION standing valves are TOO SMALL in relation to the traveling valve. Acting as suction valves, they force the crude through narrow passages at high speed, subjecting it to vacuum. Reduced gravity—cut oil and B. S. result.

The ROARK is OUTSIDE the working barrel, therefore bigger than the upper valve. It reduces cut oil and B. S., increases capacity, lengthens maximum pump stroke, and eliminates once and for all the nuisance of loose, leaky leather rings and cups.



One moment's study of the ROARK is all that is needed to demonstrate these things. The advantages are obvious.

At Your Supply House or Direct

Texas Oil Pump Co
Waco, Texas

Eastern States

PENNSYLVANIA

Company, Well and Location	Initial Production Bbls.	Depth
Greene County—		
Carnegie Natural Gas Co. A. Henderson 1	70	....
T. Stewart	¶2	....
Philadelphia Oil Co. E. Lemley 1..	5	....
Fordyce Heirs 1	¶1½	....
Orndoff & McCracken J. McCleland 1	¶2	....
Waynesburg Home Gas Co. A. Muckle 1	¶2	....
Stockdale O. & G. Co. K. Stockdale 2	¶2	....
P. R. Laughlin J. Swearinger 1....	*	....
Dunbar O. & G. Co. M. S. Hostattler 1	*	....
Allegheny County—		
Puckerton & Co. Hillman 1.....	¶1	....
Hahn & Co. Hahn 1.....	¶1	....
Fisk & Co. Heil 2.....	¶2	....
Eldred Field—		
Turner, Carryer & Dillie Shawmut 1	8	....

NEW YORK

Bolivar Field—		
Hindeman, Thompson & Miller Hazzard 35	100	....
A. L. Shaner Greenely 1	12	....
Kossuth Field—		
A. L. Shaner Richardson 1.....	10	....

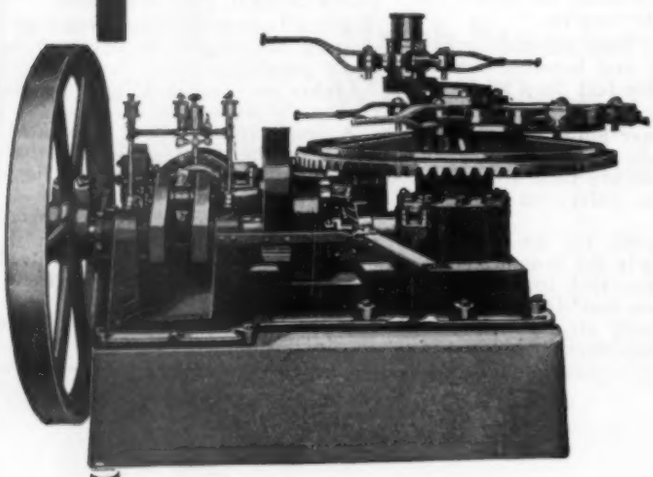
WEST VIRGINIA

Ritchie County—		
Goose Creek Oil Co. J. Newbrough 1	75	....
Adam Oil Co. James Newbrough 4	35	....
Hope Natural Gas Co. W. Wass 1...	¶12	....
Loudin & Co. J. O. Nay 4.....	¶1½	....
Hays & Roberts Lawrence 4.....	¶¼	....
Pittsburg & West Virginia Gas Co. Okey Nutter 1	*	....
Lincoln County—		
Columbia Gas & Electric Co. Seth Miller 1	¶¼	....
Roy O. & G. Co. Barrett 1.....	¶1¼	....
Foote O. & G. Co. G. Ray 1.....	¶1	....
Aetna O. & G. Co. Fred Carter 1..	¶2	....
Roane County—		
United Fuel Gas Co. W. J. Justice 1	¶2½	....
R. Samples 1.....	¶2½	....
C. E. Morris 1.....	¶2	....
Godfrey L. Cabot W. Simmons 5...	¶¼	....
Tyler County—		
Hope Construction & Ref. Co. S. T. Meredith 1	20	....
G. J. Morgan E. Brooks 1.....	1	....
Unknown, Unknown Parties 1.....	1	....
Calhoun County—		
Hope Natural Gas Co. R. G. Lynn 1	¶2	....
A. Bennett 1	¶2	....
G. F. Davis 1.....	¶1½	....
Nicholas County—		
Hamilton O. & G. Co. Unknown 1..	¶1	....
Unkown 2	¶1	....
Unknown 3	¶1	....
Kanawha County—		
United Fuel Gas Co. A. J. Hineman 1	¶1	....
S. P. Young 1	¶2½	....
Stanton & Co. S. W. Young 3.....	*	....
Wood County—		
Hoagland Oil Co. C. W. Lawer 1..	4	....
Henderson Oil Co. Straud Heirs 3..	5	....
Boone County—		
Owens Bottle Mach. Co. T. W. Bedford 5	¶1	....
Alice Hall 1	¶½	....
Lewis County—		
Mud Lick Run O. & G. Co. M. Gillan 1	¶½	....
McColl O. & G. Co. Maud Gillan 1	¶2	....
Harrison County—		
Arzpurian Oil Co. L. Stout 2.....	¶2	....
Bridgeport O. & G. Co. S. S. Farris 1	¶2	....
Braxton County—		
Pittsburg & W. Va. Gas Co. P. H. Vancoy 1	¶¼	....
West Virginia Central Gas Co. C. F. Engle 1	¶3	....
Monongalia County—		
Carnegie Natural Gas Co. N. A. Moore 1	5	3135
Wirt County—		
Roberts Bros. Rathbone 135	5	....
Wetzel County—		
Manufacturers Light & Heat Co. Ullom 3	¶3	....
Gilmer County—		
Chartiers Oil Co. Baptist Missionary 2	¶2	....

KENTUCKY

Barren County—		
Gillespie & Wiggins Wiggins 5.....	13	522
Fred Moore McCubbin 5	12	544
Ziegler Bros. T. Mansfield 3.....	8	527
Elem O. & G. Co. Warder 11.....	4	530
W. R. Jackson Creek 2.....	*	634
J. C. S. Oil Corp. Steffey 3.....	*	480
Amos & Bare R. Summers 1.....	*	646
Lawrence-Johnson Counties—		
Union G. & O. Co. J. K. Doyne 2..	45	799
L. E. Sparks 1	20	800
L. E. Sparks 2.....	20	802
Fearless O. & G. Co. D. Williams 3	7	837
George & Toms M. & L. Franklin 4	1	900
Allen County—		
Cutler & Co. J. Straight 1.....	25	402
Berry & Co. V. R. Hinton 2.....	10	290
H. A. Kiser Ayres 15	4	412
Unkown Parties Reeves 1.....	5	300
Warren County—		
White Oil Corp., J. T. Scott 10....	5	1024
Wood Oil Co. O. Grimes 5.....	4	1141
H. W. Ennis & Co. V. Potter 2....	2	1172
Green Star Oil Co. H. Carver 1....	*	560
Monroe County—		
Unknown Parties Kidwell 1.....	*	800
H. A. Kiser Emberton 1.....	*	900
Unknown Parties Ross 1	*	700
Lee County—		
Hupp, Duff & Co. G. W. Porter 2..	27	1397
E. McCooum 1	5	1403
Johnson-Magoffin Counties—		
Petroleum Exploration Co. W. H. Collins 5	7	903

Patent applied for



Pattin 4-cycle Gas Engine geared direct to single eccentric and disc pumping power.

Equivalent to double eccentric. Makes possible perfect balancing of wells without swings. For wood or concrete foundation. Perfectly concentrated power, eliminating belts, and doing away with the large power house.

Made in 8 H. P., 12 H. P., 15 H. P., and 20 H. P. sizes.

WRITE US ABOUT THIS

The Pattin Bros. Co.

Marietta, Ohio

Branch Offices and Warehouses at Tulsa, Okla., Wichita Falls, Texas. Carried in stock by Frick & Lindsay Co. in Kentucky.

"PATTIN POWER"

Company, Well and Location	Initial Production Bbls.	Depth
Sepple & Co. Julia Salyer 1	10	1100
Elliott County—		
Campbell & Wheeler J. F. Dials 2	12	1310
C. J. Sipple R. Mason 1	*	1312
Owensboro District—		
B. Thompson Barlow 1	5	740
Randolph & Stevenson Collis & Higdon 1	*	815
Owsley County—		
Combs Bros. Dev. Co. Judd 1	15	1346
SOUTHEASTERN OHIO		
Washington County—		
Harris & Co. Rose Edwards 1	20	....
Earl Stephens C. O. Troutman 1	5	....
L. Goldish & Co. J. Berger 7	2	....
Brown & Valentine M. Matheney 1	2	....
Luckey Oil Co. Devol Bros. 7	2	....
Otto Becker & Co. Rosenbush 7	2	....
Muskingum County—		
Pure Oil Co. J. A. Ashcraft 2	75	....
Mideast Oil Co. M. J. Wildman 1	¶1	....
Morgan County—		
Pure Oil Co. Wm. Eppley 3	40	....
The Sun Co. Grant Bailey 4	40	....
Meigs County—		
Ohio Fuel Supply Co. C. W. Cornell 2	2	....
Brocalsa Chemical Co. A. B. Cross 2	10	....
Noble County—		
J. O. Miller & Co. O. H. Dillehay 9	*	500
CENTRAL OHIO		
Licking County—		
Carter Oil Co. J. Vonderbark 2	150	....
J. Sommerville 2	103	....
Pure Oil Co. Ilena Smith 1	60	4380
Russ & Earley Ann Smith 1	3	....
Spindler & Donaldson C. A. Bounds 8	4	....
Wehrle Interests J. Zortman 1	*	4400
Central Ohio Gas Co. E. Richter 1	*	....
Wayne County—		
Ohio Fuel Gas Co. S. J. Hatzler 1	15	....
Arthur & Mills E. Miller 1	¶½	....
Logan Gas Co. L. E. Wiles 2	¶¼	....
T. A. Armstrong 3	*	....
Medina County—		
Logan Gas Co. Frank Walter 2	¶7	....
Jane Smith 1	¶¼	....
Ohio Fuel Gas Co. G. Acker 5	50	....
Athens County—		
Ohio Fuel Supply Co. T. Bond 2	¶1	....
Stephens & Yowman C. S. Parker 1	¶¼	....
Shady River O. & G. Co. F. W. Chapman 9	*	....
Knox County—		
East Ohio Gas Co. W. Bailes 2	*	....
Cline Bros. F. Veatch 1	5	....
Perry County—		
Logan Gas Co. L. Jourdon 1	*	....
Flint Ridge O. & G. Co. A. Berger 1	¶1½	....
Lorain County—		
Ohio Fuel Gas Co. C. Schwartz 1	*	....
Burton, Morgan & Stephens W. Stelzer 1	*	....
Hocking County—		
Preston Oil Co. D. E. Sadler 1	15	....
Ashland County—		
Logan Gas Co. E. McBride 1	¶2	....
Holmes County—		
East Ohio Gas Co. Gil Johnson 3	*	....
NORTHWESTERN OHIO		
Ottawa County—		
E. L. Luckey Luckey 3	16	1318
G. Magseig & Sons J. D. Smith 5	15	1304
River Oil Co. Mrs. S. Netcher 3	10	1312
Zorn-Hornung Oil Co. E. Yeasting 10	8	1335
Mercer County—		
E. G. & J. Henderson J. Schmidtz 1	17	1152
Deffenbaugh & Co. A. Abel 3	15	1155
Logan Oil Co. G. Breymier 3	2	1204
Fort Wayne Oil Co. Hays 1	*	1250
Van Wert County—		
American Engineering Co. Hofman 1	100	1234
Bolyard, Barnett & Co. German 1	40	1235
Cal. Neely & Co. Moore 1	4	1265
Hancock County—		
D. Kirk & Co. Levi Gorby 6	30	1317
B. Porter & Co. N. Powell 8	20	1322
Darke County—		
Mondarke O. & G. Co. Patton 11	20	1260
L. A. Watson & Co. J. Watrin 1	4	1245
Wood County—		
Zeising & Co. E. Brendt 5	10	1312
Onsel Bros. Drilling Co. Moore 1	3	1317
Shelby County—		
Eilerman Oil Co. Eilerman 3	15	1309
Allen County—		
W. O. Huntley A. Handle 1	3	1331
Hardin County—		
Allie Moore Oil Co. Carnes 1	¶2	1420
Auglaize County—		
Davidson & Co. N. Fogt 1	*	1365
INDIANA		
Jay County—		
Mesel & Spencer J. Jeffries 2	40	1110
Mesel Bros. Whiteman 4	10	1104
Amer. Engineering Co. C. C. Harris 1	40	1100
C. Davenport 1	5	1134
Randolph County—		
T. O. Tharp W. Cline 1	*	....
Grant County—		
J. Wides & Co. A. Moorman 5	*	....
Wells County—		
Hartford O. & G. Co. S. Griffith 1	*	....
ILLINOIS		
Wabash County—		
Arkansas Fuel Oil Co. & Co. E. Leighty 1	200	1570
J. T. Smith 1	5	1543
J. Mullineaux 1	7	1559
B. F. Price 1	5	1605
S. Newsom 1	5	1580
Joseph S. Young Jr. & Co. John Leek 2	6	1465
Black Gold Oil Co. J. T. Smith 2	*	1580
Crawford County—		
Kewanee O. & G. Co. J. Wright 37	1	492
J. Wright 38	4	500
Schregongest & Karnes Lamb 5	3	980
Clark County—		
Gillette & Co. H. Echard 2	*	460
Ohio Oil Co. Z. E. Brant 16	*	1969
Edgar County—		
L. C. Hood & Co. J. Sallee 2	*	461

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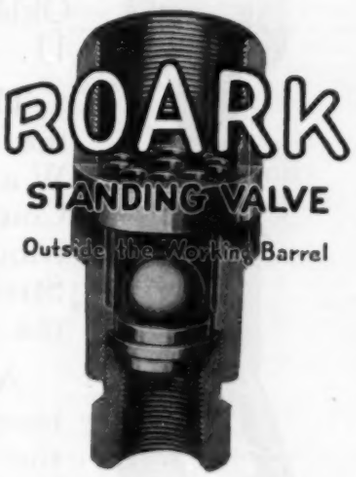

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At Your Supply House or Direct

Texas Oil Pump Co
Waco, Texas

End of Season Finds Four Important Tests Drilling in Alberta, Canada

Calgary, Alta., Oct. 6.—As the 1924 season draws to a close, Imperial Oil, Ltd., has four important tests drilling in Alberta, in addition to the new test started this summer in the far north.

No word has been received from Fort Norman since the latter part of July, the report then being that work had been definitely started on a new test quite close to the discovery well, which is 53 miles north of Fort Norman. This test is being started in preference to deepening the discovery well, and will test the lower horizons at this point.

In Alberta an important deep test is being drilled by the Royalite Oil Company, an Imperial subsidiary, in the Okotoks field, on section 7-20-2w5. Royalite No. 4 at last reports was drilling around 3670 feet with a six-inch hole. About three weeks ago an additional gas flow of 1,500,000 cubic feet a day was encountered. Some 20 feet lower, in a distinct sand, a small flow of light oil was struck; this made about one barrel a day. The drilling is being carried deeper for a thorough test.

Two other tests are being drilled in the Rocky Mountain foothills. To the north, and almost due west of Edmonton, in the Brazeau district, Coalspur No. 2 is drilling at 1443 feet, after striking at 1435 feet a sufficient gas flow to provide fuel for the drilling outfit. South of the Okotoks field, in the Willow Creek district, a new test, started this spring, has reached 700 feet or more. The location is about 40 miles west of Nanton and five miles from the Willow Creek No. 1 dry hole, being close to Rice Creek; it is being planned as a deep test, starting with a 20-inch hole.

In the Sweetgrass field, east of Coutts, Imperial Oil, Ltd., is drilling Dead Horse Coulee No. 2, about a mile and a half north of the Rogers-Imperial gasser. The heavy rotary here is making rapid headway, and the test should finish before the end of November; it set 15½-inch casing at 110 feet. The Rogers-Imperial is at a standstill, waiting for casing; the present depth is a little more than 2600 feet, the drill having just got through what is thought to be a hard capping formation.

Irma-Wainwright

Results in the Irma-Wainwright field, east central Alberta, are still somewhat inconclusive. British Petroleums No. 4, which is not far from the No. 2 producer drilled last fall, has been brought in, but no definite capacity test seems to have been made. The well is flowing about 50 barrels a day, and it is claimed the oil shows 18.6 gravity. This would be about 4 points better than the heavy crude from the lower sand in British Petroleums No. 2. The operators claim the well will make 200 to 250 barrels a day when put on the pump; and it is definitely a small to fair producer, if not better than that.

British Petroleums No. 3 has not yet been tested, owing to water trouble; it has been standing idle, waiting for tools to get it in shape for production. On the first showing it looked the best of the three British Petroleum wells. No. 2, drilled last fall, though 200 barrels a day was claimed, has never been put on an actual producing basis. Now that No. 4 has been finished, work will probably be commenced on No. 5.

Maple Leaf Oil and Gas Company No. 1, section 24-45-8w4, has been drilled into the gas sand encountered at 1775 feet and it looks like a good gasser. It may make 5,000,000 cubic feet a day or better; no definite capacity test has been made. It is claimed a little oil is coming with the gas, but this report may be discounted till some definite oil production is gauged. The outfit will be moved to another location on the same section for No. 2 test.

Three other tests are drilling in this field, the Irma Oil and Development Company, section 28-45-9w4; Western Consolidated, section 20-45-6w4 and Wainwright Oil Producers, section 36-44-7w4, but none of these are as yet near the producing sands, and all seem to be making rather slow headway. Imperial Oil, Ltd., which has already drilled two tests in the Irma-Wainwright field, one a gasser and the other a dry hole, will not undertake any further work at present in this area.

A new venture in northern Alberta to be sponsored by Calgary interests headed by S. E. Slipper, will test the upper Peace River section, near Fort Vermilion and Vermilion Chutes. The Lord Rhondda interests drilled a test near Vermilion Chutes in 1915, but encountered sulphur water, and abandoned the venture.

Exhibit

THE STEWART Safety Sucker Rod Hook is attending the second International Petroleum Exposition and Congress, Tulsa, Oklahoma, October 2-11.

The exhibit is under the auspices of The Walter O'Bannon Company, Sole Distributors, 817 E. First Street, Tulsa, Oklahoma.

All you boys who have been interested in the Stewart Hook should improve this opportunity to find out more about it. It's a world-beater!

GOOD PEOPLE TO DO BUSINESS WITH

Pelican Well Tool & Supply Co.

General Offices: Shreveport, La.

Permits Granted and Locations for New Wells

(California—Kansas—Oklahoma—Texas—Arkansas—Louisiana)

TEXAS

Archer County—Shamrock Oil Co.'s N. D. Goldsmith No. 14, blk 5, G. P. Diggs sur, 300 ft S No. 12; J. L. Anderson 1, blk 18, J. L. Anderson sur, 150 ft to S and W lines; G. M. Boren 2, R. D. Newman sur, 528 ft S No. 1. Melat & Graham's N. D. Goldsmith 3, blk 6, G. P. Diggs sur, 300 ft N No. 2. Geo. S. Anderson's Dr. E. M. Hughes 2, blk 16, D. C. S. L. No. 3 sur, 300 ft E No. 1. P. F. Gwynn's J. A. Wood No. 1, 2406 TE&L sur, 150 ft to S and E lines. Murchison & Fain's L. F. Wilson 2, blk 26, Amer Trib sur, 300 ft E No. 1. J. Roy Dee's J. H. White 1, blk 34, Amer Trib sur, 150 ft to S and W lines. T. O. Shappell & Sons' Kemp & Kempner 8, blk 83, W. V. F. L. sur, 300 ft S No. 16. R. R. Robertson's J. H. White 1, blk 35, Amer Trib sur, 150 ft to N and E lines. Maer & Staniforth's T. L. Griffin 1, blk 1600, TE&L sur, 150 ft to N and E lines. A. T. McDonald's Mrs. W. H. Sterrett 1, sur No. 2, S. P. Ry, 150 ft to S and W lines. Burns & Maxon et al's A. P. Nichols 1, sur 10, G. H. White, 150 ft to S and W lines. Panhandie Ref. Co.'s A. Beardon 1, Jas. Hopkins sur, 150 ft to N and E lines; A. Beardon 2, Jas. Hopkins sur, 300 ft W No. 1; A. Lewellyn 2, A. Lewellyn sur, 150 ft to S and W lines. Texhoma Oil & Ref. Co.'s B. R. Jeske 1, Thos. McCoy sur, 150 ft to N and E lines. Woodburn Oil Corp.'s L. F. Wilson A-11, sur 26 Amer Trib sur, 300 ft W No. 1. Simms Oil Co.'s W. F. Parrish 1, sur 26 H&TC Ry, 150 ft to N and E lines; W. F. Parrish 2, sur 26 H&TC Ry, 500 ft S No. 1. H. A. Muse's W. F. Parrish 2, sur 26 H&TC Ry, 300 ft S No. 1. E. M. Jones' J. A. Kunkel 1, blk 4, Thos. McCoy sur, 150 ft to N and E lines.

Angelina County—Ferdinand Heine's S. W. Henderson 1, J. H. Ellison sur, 470 ft to W and 150 ft to S line.

Bexar County—Joe Clutter's Fee 7, Hernandez sur No. 209, 155 ft to E, near S line.

Brown County—Ben O. Madison's C. N. Calvert 1, R. Hall sur, 1250 ft to W and 160 ft to N line. L. F. Mendenhall et al's J. W. Newton 2, Wm. Miller sur, 175 ft to S and W lines.

Callahan County — E. L. Bradley's Z. C. Wagley 1, sur No. 2, D&D Asy, 150 ft to W and 450 ft to S line.

Comanche County — Cox & Spratt's L. O. Sturkie 1, A. Hoxey sur, 500 ft to N and W lines.

Caldwell County—Grayburg Oil Co.'s G. W. Tabor 11, S No. 2. Caldwell Oil Co.'s Hardeman 6, 300 ft N No. 1. United North & South Oil Co.'s M. Moore 9, Jno. Henry sur, 468 ft NE No. 1.

Guadalupe County—United North & South Oil Co.'s A. J. Baker 23, H. Cottle sur, 461 ft to E and 480 ft to S line.

Hardin County—Paraffine Oil Co.'s Fee 58, 80 ft S No. 45. S. R. Buchanan's Fee 80, J. Milholme sur, W No. 77. Anderson Munson et al's W. E. Hodges 1, M. A. Harris sur, 250 ft N Kirby No. 2.

Harris County—Gulf Prod. Co.'s Chapman-Bryan 8, Wm Scott sur, 820 ft to E and 420 ft to N line; Wright A-22, Wm. Scott sur, 35 ft to E and 25 ft to S line.

Hidalgo County—Humble Oil & Ref. Co.'s King 17-A, 2 miles E 16-A; King 18-A, 2 miles E 17-A; King 19-A, 2 miles E No. 18-A.

Hutchinson County—Prairie Oil & Gas Co.'s D. W. Shaw-K, blk 4, sur 27, 320 ft to W and 2310 ft to S line. C. M. Spurlock's Smith 1, blk Y, M. S. C. sur, 370 ft to E and 460 ft to S line.

Jack County—Lex McClellan's N. W. Davis 1, BBB&C Ry sur, 240 ft to W and 808 ft to S line.

Jefferson County — Gulf Prod. Co.'s Gladys 149, blk 36, Gladys City sur, 32 ft to W and 25 ft to S line.

Liberty County—Republic Prod. Co.'s Dolbear 93, J. Devore sur, 1350 ft to E and 2535 ft to S line. Gulf Prod. Co.'s Phoenix 17, J. Devore sur, 1296 ft to E and 739 ft to N line. Humble Oil & Ref. Co.'s Guedry 18, J. Devore sur, 890 ft to S and 50 ft to E line.

Milam County—Sinclair Oil & Gas Co.'s H. F. Smith 1, Wm. Moore sur, 300 ft to S and E lines. Luckey & Wilson's O. L. Moody 2, T. J. Chambers sur, 150 ft to N and 250 ft to S line. Fogle Oil Co.'s B. McClellan 13, Burchard sur, 680 ft SW No. 12. J. R. Wolfley's Jno. Stork 1, M. J. Delgado sur, 3000 ft to S and 150 ft to E line.

Mitchell County — California Co.'s W. H. Abrams 7, sur 33 T&P Ry, 330 ft to N and 372 ft to W line.

Navarro County—Jno. Hooser's H. A. Swink 3, White sur, SW cor. Pure Oil Co.'s R. Kent 12, Jas. Smith sur, 2222 ft E No. 7. Geo. I. Peyton's R. R. Davis 2, Jno. Choate sur, 300 ft SW No. 1.

Orange County—Orange Petroleum Co.'s O. Chesson 8, Wm. Dyson sur.

Palo Pinto County—R. B. Pender's J. Simmons 2, sur 39 T&P Ry, 200 ft to W and 167 ft to N line.

Runnels County—M. D. Cerf's H. Giesecke 2, Jas. Hughes sur No. 227, no map.

Shackelford County—Swink & Davidson's C. B. Snyder 1, sur 39 Ins. Asy., 450 ft to N and 150 ft to W line. Fred Pool's W. L. English 3, blk 18, Univ. Lands sur, 300 ft to E and 150 ft to S line. Tidal Oil Co.'s J. H. Elliott 2, sur No. 12 Ins. Asy. 1120 ft to N and W lines. Atkinson, Pinney & Ferguson's M. C. Townsend 1, sur No. 55 Univ. lands, 450 ft to W and 150 ft to S line.

Stephens County—J. M. Weaver & States Oil Corp.'s I. Boles 1, sur No. 7, T&NO Ry, 900 ft to N and 300 ft to E line. R. B. Pender's Chas. Hart 1, sur 3383 TE&L, 760 ft to N and 330 ft to W line; J. L. Keel No. 3, sur No. 6, T&P Ry, 800 ft W No. 2.

Wichita County—R. T. Couch's W. J. Donehoo 12, Robertson sur, 550 ft S No. 4; W. J. Donehoo 13, Robertson sur 395 ft S No. 4; W. J. Donehoo 14, Robertson sur, 230 ft SW No. 11; W. J. Donehoo 15, Robertson sur, 550 ft SW No. 5; W. J. Donehoo 16, Robertson sur, 305 ft S No. 5; W. J. Donehoo 17, Robertson sur, 230 ft SW No. 3; W. J. Donehoo 18, Robertson sur, 300 ft W No. 19; W. J. Donehoo 19, Robertson sur, 620 ft N and E lines; W. J. Donehoo 20, Robertson sur, 50 ft E No. 3. T. J. Kennedy's Jno. Moore 3, BBB&C Ry sur, 153 ft to E and 894 ft to S line. Biggs Oil & Gas Co.'s J. A. Fisher 8, sur 9, HT&B Ry, 150 ft to N and 1078 ft to E line. Humble Oil & Ref. Co.'s Kemp & Allen No. 1, blk 44, W. V. F. L. sur, 600 ft to N and 450 ft to W line. L. P. Hammond's T. L. Burnett 2, Sur No. 6 G. R. Meade, 150 ft to N and E lines. Maer & Staniforth's S. B. Burnett No. 9, sur No. 6 G. R. Meade, 300 ft S No. 6; S. B. Burnett 4, sur No. 2 T&NO Ry, 300 ft S No. 2. Bass & Dillard's R. M. Peeler 8, A. M. Balch sur, 300 ft S No. 7. Shaw & Rathke's W. T. Waggoner 1, Sur No. 34 H&TC Ry, 510 ft to N and 150 ft to E line. Shappell Oil Co.'s J. B. Link 1, blk 21, D. C. S. L. sur No. 2, 1281 ft to E and 1355 ft to S line. McClure & Sons' W. G. McClure No. 2, Sur No. 128 SA&MG Ry, 150 ft to W and 510 ft to S line. J. L. Art's J. A. Terhune 1, Sur No. 128 J. M Sharp, 150 ft to N and W lines. Helt et al's Kemp & Newby 1, Sur No. 10 HB&T Ry, 150 ft to S and W lines. J. A. Elliott's J. C. Jennings 2, Sur No. 8 HT&B Ry, 150 ft to N and E lines. Petroleum Prod. Co.'s M. Staniforth 10, H. Balch sur, 300 ft W No. 5. W. H. Hammon et al's S. H. McCarty 1, W. R. Laves sur, 150 ft to S and W lines. Proctor Oil Co.'s C. Birk 11, M. Powell sur, 925 ft to W and 250 ft to N line. Underwood Drilling Co.'s N. Maer 8, H. B. Balch sur, 300 ft W No. 4.

Wilbarger County — Birdwell, Heydrick & Palmer's W. H. Stephens 1, Sur No. 83, H&TC Ry, 175 ft to W and 150 ft to S line.

Webb County — Magnolia Petroleum Co.'s Ochoa 13, I. Guiterrez sur, 150 ft to N and E lines.

Wharton County—E. F. Simms' Missouri-Lincoln Trust Co. 1, S. Castleman sur No. 5, 10,336 ft to N and 7140 ft to E line.

Young County—Cheney & Anzac Oil Corp.'s J. A. Driver 5, C. E. F. Auberg sur, 150 ft to W and 200 ft to S line. C. F. Littlefield's R. Campbell 1, Sur No. 236 TE&L, 150 ft to N and W lines.

OKLAHOMA

Carter County—Amerada Pet. Co.'s Farve 20, C NW SE SE 20-5s-1e; Cassidy 1, C S L NE NW NE 33-5s-1e.

Creek County—Wilson & Glasgow's Mounds townsite, lot 5, blk 19, 8-16-12. Platt et al's No. 1, lot 3, blk 28 Mounds townsite, 8-16-12. Stout et al's No. 1, lot 13, blk 21, 8-16-12. Delmar Producing Co.'s Strip 1, C NW SE NE 19-17-9. McGinnes' Sizemore 1, SEc NE NE 5-18-12.

Cotton County—Malernee et al's (formerly Southard et al) Wiley 4, SEc SW NE NE 5-2s-10w (old well deepened).

Hughes County—Producers & Refiners Corp.'s Lizzie Beaver 1, C NW NE 15-7-8. Papoose Oil Co.'s Alexander 6, C SW NE SE 4-9-9 (old well deepened).

Kay County—Magnolia Pet. Co.'s School

Weekly Comparison of New Wells

Following is a condensed table giving a comparison of permits or locations made for new wells in Kansas, Oklahoma, Arkansas, Louisiana, Texas and California.

Number of New Wells for Week Ending

	June 28	July 5	July 11	July 18	July 25	July 1	Aug. 8	Aug. 15	Aug. 22	Aug. 29	Sept. 5	Sept. 12	Sept. 19	Sept. 26	Oct. 3
Kansas	17	9	8	12	13	..	9	12	16	10	19	6	14	23	21
Oklahoma	78	70	59	111	75	62	60	53	80	68	51	73	63	60	66
Arkansas	24	...	18	34	43	..	13	8	11	2	19	13	13	12	7
Louisiana	13	4	8	7	9	10	3	4	8	7	9	9	12	14	5
Texas	132	134	65	90	131	103	102	75	89	82	85	130	78	110	96
California	...	27	22	24	27	22	24	22	25	16	18	..	14	19	21
Totals	264	244	180	278	298	197	211	174	229	185	201	231	194	238	216

Land 1, C NW NE NW 13-26-2w. Comar Oil Co.'s McCormick 1, "B" C NW SW SE 21-29-1w. Alcorn Oil Co.'s Fitzgerald 1, C SE SW NE 1-26-2w; Hockstater 1, SEc SW 1-26-2w; North 2, SWc NE 12-26-2w; Miller 1, NWc SE 12-26-2w; Hubbard 2, NWc 12-26-2w; Hubbard 2, NEc NW 12-6-2w; McCullough 3, NEc SW 12-26-2w. Comar's Beverlin 7W, C S L NW 34-25-1w; Ogg 2W, C NE SW SE 35-25-1w; Ogg 3W, C NE NE SE 35-25-1w (old well deepened); Ogg 7W, C SW SE SE 35-25-1w (old well deepened); Ogg 8W, C SW NE SE 35-25-1w. Carter's Goltry 14, C SW SE NW 35-25-1w; Goltry 15, C NE SW NW 35-25-1w.

Noble County—Comar Oil Co.'s Blubaugh 11W, "A" C NW NE SW 2-24-1w; Gaume 5W, C N L NE 2-24-1w; Gaume 12W, C SE SW NE 2-24-1w; Gaume 15W, C S½ S½ NE 2-24-1w; Gaume 16W, C S½ N½ NE 2-24-1w. Nelson & Harding's Hall 1, C NW NW SE 32-20-1e.

Okfuskee County—Roxana Pet. Co.'s Sam Little 1, C S L SW SW SW 11-10-8. Empire Gas & Fuel Co. & Jellison's Grayson 1, C NW NW NW 30-11-10. Empire Gas & Fuel Co.'s Walker 1, SWc SW NW NW 32-14-10. C. F. Noble's Stuart 1, C NE NE NW 20-24-10. Phillips Pet. Co.'s McIntosh 1, SWc SW NE 24-14-9. Skelly & Billingslea's Posey 1, C NW NE NE 31-15-9. Gypsy Oil Co.'s J. Williams 2, C SW SW SE 34-10-9. Slick's H. Sand 3, C SW SE SE 35-10-9.

Okmulgee County—Sheridan Oil Co.'s Chase 1, C SW SW SW 8-15-12. Hall & Donnelly's Johnson 2, SEc SW 17-14-10.

Osage County—Knupp Oil Co.'s No. 1, C NE NE NE 10-26-11.

Seminole County—Powers Pet. Co.'s Terrol 1, C NE NE NE 18-10-8. Central National's Dunn 6, C S L SE NE SE 4-10-8; Dunn 7, C NW SE SE 4-10-8. Waite Phillips' Dunn 3, C N L SE NE SE 4-10-8. Cosden's Jackson 2, C NE SE SW 4-10-8. Empire Gas & Fuel Co.'s Dunn 3, C NW SW SE 4-10-8; Dunn 4, C NE SW NE 4-10-8. Pure Oil Co.'s Bruner 11, C NE NW SE 9-10-8; Bruner 12, C SW NW SE 9-10-8. Gypsy's J. Halg 7, C SE SW NE 9-10-8. Roxana Pet. Co.'s S. Little 3, C SW NE SE 10-10-8. Carter Oil Co.'s S. Little 3, C SE NE SE 10-10-8. Roxana's S. Little 2, C NW SW SW 11-10-8. Shaffer Oil & Refining Co.'s J. Berryman 5, SWc SE NW NW 32-8-8.

Stephens County—Grisby Oil Co.'s Schick 2, SWc NE 27-1w-8w.

Tulsa County—Pettit's Childers 1, C S L NE NW 10-17-14. Bradstreet's Coleman 1, C NW NW NW 26-17-12. Peterson & Shaw's Tucker 1, C NW SE 11-17-12. Shaffer Oil & Refining Co.'s Partridge 2, C S L NW SW 5-19-12. Hall et al's McHenry 3, NWc SE SE 1-17-14.

Wagoner County—Knox & Shaune's W. McIntosh 1, C NW SW NW 17-17-16. O. A. Sewell's B. Bandnot 1, SWc NW NW 17-17-16. Perry & Hartman's G. Beco 1, NEc NE NE NE 18-17-16.

ARKANSAS

Ouachita County—Forrest Oil Co.'s Mullins 4, 27-15-16, 200 ft N & W of SEc SE¼ SE¼ (old well to be deepened). Magnolia Pet. Co.'s N. Patton 3, 32-15-16, 200 ft S & E of NWc W½ NE¼ SW¼. McCorkle et al's Smith 1, 25-15-17, 200 ft N & W of SEc S½ NE¼ SW¼. Miller & Winger Synd.'s Hardin 2, 28-15-16, 200 ft S & W of NEc SW¼ SE¼. J. D. Reynolds' Brierton 3, 25-15-17, 200 ft N & W of SEc NE¼ NW¼. Sutton et al's Hughes 2, 28-15-16, 150 ft N & W of SEc SW¼ NE¼ (old well to be deepened).

Union County—Magnolia Pet. Co.'s Campete-Campbell 3, 13-16-17, 200 ft S & E of NWc NE¼.

KANSAS

Butler County—Vickers Pet. Co.'s Perner 1, SEc SW 32-24-4e. Mid-Kansas Oil Co.'s Slaybaugh 2, NWc SE SW 10-28-6e.

Coffee County—Braden Bros.' Beyer 1, SEc NW 13-22-13e.

Cowley County—Joe Nathan & Brinn's Baird 2, NWc NE 20-34-4e.

Greenwood County—Tidal Oil Co.'s South 2, C NE SE SW 22-22-11. J. H. Millikin's Bersie 2, C NW SW SE 22-22-11e. Braden Bros. Kraft 3, NWc NE 34-22-13e. J. F. Derby's Hessler 5, NEc NW 34-22-13e. Mid-Kansas Oil Co.'s Martindale 12, SWc 31-23-10. Roth, Mission & Farout's Cartwright 4, NEc 1-24-9e. Gypsy Oil Co.'s Osmundson 2, NWc SW SW NW 23-24-9e. Federal Oil Co.'s Cartwright 7, NWc 6-24-10 (used to be Rogers et al).

Marion County—Watchorn O. & G. Co.'s Townsend 38, SWc SE NE 5-22-4e.

Montgomery County—Tress Oil Co.'s Will 1, SEc NE 13-31-15e. Talbot's Farlow 1, SEc SW SE 31-31-15e. Hobson et al's Cox 1, C NW NE 23-32-14e. Homer T. Lamb's Good 3, SWc NE NW 33-32-14e. J. F. Mergen et al's Miller 1, NEc SW 23-33-14e. John Harwood et al's Good 1, SWc SE NE 12-33-16e. Morrison & Everly's Dobson 1, SWc NW SW 16-34-15e.

Wilson County—Callahan et al's Odell 1, NEc 35-29-14e.

CALIFORNIA

Dominguez Field—Associated Oil Co.'s De-Francis 1-B, 34-3-13. United Oil Co. & Henderson Pet. Corp.'s Dominguez No. 2, 3-3-13. Shell Co.'s Reyes No. 18, 34-3-13.

Midway Field—Calivada Oil Co.'s No. 5, 34-32-24. Victor Oil Co.'s No. 12, 35-32-23. Pacific Oil Co.'s No. 30, 25-31-23; No. 24, 33-31-24; No. 41, 13-32-24.

Orange County—Pasadena Oil Co.'s No. 3, 28-6-10.

Rosecrans Field—Pet. Midway Co. Ltd.'s No. 1 Colby, 20-3-13. Chas. H. Behr's No. 1, 18-3-13. Barnsdall Oil Co.'s Rosecrans No. 2, 20-3-13.

Santa Fe Springs Field—Bandini Pet. Co.'s Off No. 4, 5-13-11.

Sunset Field—Pliocene Oil Co.'s No. 3, 18-11-23. Frankel Orloff Oil Co.'s No. 1, 25-11-24.

Torrance Field—Standard Oil Co.'s Marble Fee No. 23, 15-4-14; Marble Lease 2-1, 22-4-14. Bernard LeMohn's No. 3, 13-4-14. Superior Oil Co.'s Torrance No. 54, 24-4-14; Torrance No. 51, 19-4-13.

Wheeler Ridge Field—Standard Oil Co.'s Kern County Lease No. 2, 27-11-20.

LOUISIANA

Bossier Parish—W. F. Hanby & J. F. Palmer's McCann No. 4, 31-16n-11w, 300 ft S and 300 ft E of NW cor NE¼ of SW¼.

Caddo Parish—Lewis Oil Corp.'s Caddo Mineral Land No. 5, 24-22n-15w, 920 ft N and 1050 ft SW of SE cor SW¼.

Morehouse Parish—La Del Oil Properties' W. W. White No. 3, 33-20n-5e, 760 ft N and 660 ft W of SE cor of NE¼.

Ouachita Parish—Texas Company's La Del Oil Properties No. 3, 11-19n-4e, 600 ft S and 660 ft W of NE cor of SE¼.

Webster Parish—Humble Oil & Ref. Co.'s Bodcau Lumber Company B-3, 28-21n-10w, 330 ft S and 330 ft E of center of section.

J. W. McCullough, general manager of the Independent Oil and Gas Company of Okmulgee, Oklahoma, has returned to his home there, after an extended trip to Colorado.

Bert Loucks, vice-president of the Marion Machine, Foundry and Supply Company, has returned to company general offices in Marion, Indiana, after a trip through the field which carried him to Casper and other points in the west.

E. H. Steiger of Casper, president of the New York Oil Company, was a business visitor in Denver recently. He was accompanied by M. E. Young, general manager of the company.

J. M. Danziger of the Pan-American Petroleum and Transport Company of California, is in New York in connection with company business affairs.

Geo. C. Kiskaddon, who has been operating independently on the West Coast for several years with Los Angeles as headquarters, has returned to Tulsa.

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912,

Of The OIL WEEKLY, published weekly at Houston, Texas, for October 1st, 1924:

STATE OF TEXAS,
County of Harris—ss.

Before me, a notary public in and for the State and County aforesaid, personally appeared A. L. Burns, who, having been duly sworn according to law, deposes and says that he is the general manager of The OIL WEEKLY and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 443, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor and business managers are:

Publisher, The Gulf Publishing Company, R. L. Dudley, President, 1716 Dallas Ave., Houston, Texas.

Editor, Spencer W. Robinson, 1716 Dallas Ave., Houston, Texas.

Associate Editor, J. Kent Ridley, 1716 Dallas Ave., Houston, Texas.

Gen. Manager, A. L. Burns, 1716 Dallas Ave., Houston, Texas.

2. That the owner is: (If the publication is owned by an individual his name and address, or if owned by more than one individual the name and address of each, should be given below; if the publication is owned by a corporation the name of the corporation and the names and addresses of the stockholders owning or holding one per cent or more of the total amount of stock should be given.)

Jas. Anderson, Houston, Texas; R. L. Blaffer, Houston, Texas; Mrs. S. C. Blaffer, Houston, Texas; A. L. Burns, Houston, Texas; J. F. Carter, Jr., Tulsa, Oklahoma; R. E. Connell, Houston, Texas; H. W. Draper, Houston, Texas; Dr. N. L. Dudley, Goose Creek, Texas; R. L. Dudley, Houston, Texas; W. S. Farish, Houston, Texas; Dr. J. L. Gross, Kansas City, Mo.; Howard R. Hughes Estate, Houston, Texas; Chas. H. Lane, Houston, Texas; W. B. Larkin, Wichita Falls, Texas; J. H. McEvoy, Houston, Texas; J. H. McEvoy, Jr., Houston, Texas; W. A. Miles, Ft. Worth, Texas; C. F. Mirus, Tampico, Tamps., Mexico; Mrs. J. B. Moore, Houston, Texas; Wallace E. Pratt, Houston, Texas; Spencer W. Robinson, Houston, Texas; J. E. W. Schneider, Houston, Texas; C. N. Scott, Houston, Texas; R. S. Sterling, Houston, Texas; Jno. R. Suman, Houston, Texas; Wm. A. Vinson, Houston, Texas; Bud Waller, Chicago, Ill.; C. F. Williams, Humble, Texas; E. E. Watts, Houston, Texas.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.)

H. C. Weiss, Houston, Texas; Jas. Anderson, Houston, Texas; Howard R. Hughes Estate, Houston, Texas; R. L. Blaffer, Houston, Texas; W. S. Farish, Houston, Texas; Chas. H. Lane, Houston, Texas; John Hammon, Houston, Texas; R. S. Sterling, Houston, Texas; F. W. Kitchel, Houston, Texas.

4. That the two paragraphs next above giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

That the average number of copies of each issue of this publication sold or distributed through the mails or otherwise, to paid subscribers during the six months preceding the date shown above is ..... (This information is required from daily publications only.)

A. L. BURNS,
Gen. Manager.

Sworn and subscribed before me this 6th day of October, 1924.

Maurice Hirsch,
Notary Public, Harris County, Texas.
(My commission expires June 30, 1925.)

Gas Engine Gaining Favor Around Bradford

Fuel cost less where hauling coal is the big item; gas engine drills to 2000 feet

By Grady Triplett

IN ORDER to escape mounting fuel costs, contractors and producers of the Bradford-Allegany district of Pennsylvania and New York have turned to the gas engine for drilling power. There are some 400 gas engines operating in this territory now. Perhaps 90 per cent of the drilling wells are going down from power of gas engines.

Adoption of the gas engine is the outgrowth of the use of coal for firing boilers. This district has not had sufficient gas for firing boilers over a long period. Coal came into favor with the passing of gas. But the price of coal and the cost of hauling in recent years has seen fuel bills for 1500-foot wells mount to around $400.

With the gas engine this item is reduced to less than $50 under ordinary circumstances. Then it has the additional safety factor of being available

Typical well for drilling with gas engine power around Bradford.

at all times, while long spells of wet weather have been known to prevent hauling coal to leases off the improved highways. The practice now, where steam is used, is to haul coal by truck to the closest point on a paved road and dump it, where it is taken in by team, as road conditions permit.

Every type of drilling gas engine, manufactured in the East, is to be found around Bradford. Both single and multiple cylinder engines are giving satisfaction. Horse power ratings range from 25 to 80.

Wells in the Bradford area seldom require drilling deeper than 2000 feet. The majority of completions are from 1700 to 1900 feet. While some portable machines are in use, contractors prefer derricks in most instances.

Control From Derrick

So the use of the gas engine at Bradford involves setting up that type of engine, where the steam driven engine otherwise would be placed. All gas engines for drilling in this field are belt driven and are equipped with reversible clutch. Throttle control and clutch control are at the derrick floor, leaving the driller and crew to go about all work as if drilling under any other conditions.

But contractors and manufacturers have found the human factor the most serious obstacle in introducing the gas engine for drilling work. Had not necessity compelled contractors to find some means of escaping the fuel item when using coal, it is doubtful if the gas engine ever would have been adopted. Contract drilling prices are from 90 cents to $1.10 a foot around Bradford. The saving of gas over coal is sufficient under such conditions to allow drilling at a profit.

Drillers, some who declined to try gas power for years, now admit they can use the gas engine for wells under 2000 feet to as good advantage as they formerly used steam. They all explain this with an admission that use of the gas engine involves forgetting some old tricks as well as learning some new ones. The operation of a gas engine for drilling is something that has to be learned, if the experience of drillers around Bradford is typical.

The practice of manufacturers is to have men supervise the installation of gas engines for drilling. These experts remain to see drilling started with new engines. If the driller is trying the gas engine his first time, the expert may remain for a day. Even when the driller has drilled with gas but with an engine of different design, manufacturer's representative makes sure of his installation by helping to get the engine started and under way.

Conditions vary to such an extent that accurate figures can not be compiled. Some producers furnish gas from the lease without cost to the contractors. Producers sell gas to the contractor as low as 25 cents per 1000 cubic feet. Commercial prices range from 50 cents to 75 cents a thousand cubic feet.

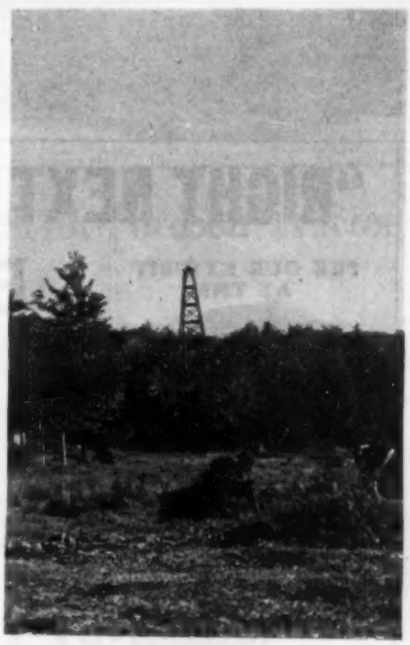
Costs Low

Where wells have been finished without any fishing time, the fuel cost has been as low as 1 cent for each foot. In one case the fuel cost with gas was $81. This well had several fishing jobs. One set of figures, which are are good for average cost as can be had, show a charge of $38 a well for fuel with gas engines.

As this is less than the hauling cost for coal, the saving with the gas engine is evident.

Another item of saving, although it had nothing to do with the adoption of the gas engine at Bradford, is the reduction in the amount of water needed. The gas engine eliminates all water for the boiler. One 50 barrel tank of water a day is sufficient for drilling with the gas engine. Its use is confined to the hole and for cooling the engine. As there is little loss in cooling water, the use is confined to the hole.

The gas engine for drilling, although adopted to fill an emergency and introduced despite objection, is the accepted power for the Bradford-Allegany area. That it is gaining favor is evident from records of the selling agencies for the several manufacturing concerns.



There is a Reid Gas engine running the tools at 1900 feet in this Pennsylvania well. The timber, second growth, is typical of the Bradford field.

Pennok Reorganization Approved

New York, N. Y., Oct. 3.—Directors of the Pennok Oil Company have approved the company's reorganization plans, which include the liquidation and dissolution of the present company and the transfer of its properties to a new company to be the Pennock Oil Corporation of Delaware. A meeting of stockholders of the Pennok Oil Company has been called for October 15 to pass on the reorganization plans. Pennok Oil operates properties in Oklahoma, Kansas and Texas.

Well Cleaning Method Originated by I. L. Dunn

Tulsa, Okla., Oct. 6.—Attention has been called to an inaccuracy appearing in a recent article contributed by Grady Triplett concerning the development of methods of cleaning wells with air. The following letter from Clyde I. Layton of the Tidal Companies, Dewey, Oklahoma, is self explanatory:

"In your article in The OIL WEEKLY of September 12, entitled 'Develop Method of Cleaning Wells With Air,' you state: 'In his efforts to find a quicker and cheaper method of reviving old wells, Mr. Layton hit on compressed air, and his persistence resulted in the building of the equipment and its use.'

"This statement is incomplete, and so, is misleading. As it is both unfair to Mr. I. L. Dunn, the inventor, and is damaging to the business interests of Smith, Dunn & Lewis, of Tulsa, I request that you have this letter of correction published in an early issue.

"About a year ago Mr. Dunn informed me of how he was cleaning out old wells on his eastern properties with compressed air, and that he was planning to build a portable machine for use in the western fields. He told me that he would have to find out first by tests on his eastern properties whether the volume of air and the pressure needed would permit the building of a practical machine, and whether he could find a suitable compressor. After making such tests and looking over a wide field of different makes of compressors, Mr. Dunn informed me that it would be practical to build a portable machine, and at the urgent solicitation of Mr. A. A. Beard of this company, and myself, Mr. Dunn undertook to design and have built at the expense of the Tidal Oil Company, a trial machine.

"The first plans were to use a Louisiana tractor, described in your article, but our company desired to hold the machine for other purposes and the first outfit consisted of a Fordson tractor, belted to an Ingersoll-Rand compressor, which was mounted on a trailer. With it two Bartlesville sand wells were cleaned out near Dewey, and the practicability of the method was demonstrated, but it was found that the experimental machine which was designed for the 600 foot Wayside sand wells did not have sufficient power for the 1300 foot Bartlesville sand wells for which I used them.

"After this successful demonstration, the machine was reassembled on the Louisiana tractor and the tank was enlarged and the outfit was tried out under the supervision of myself, assisted by Mr. Mingus, an experienced employe of Smith, Dunn & Lewis."

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"First Principles of the Oil Business"

"Consider carefully the history, development and importance of the oil industry with relation to civilization and progress. Note closely the co-ordinated business methods of legitimate oil operators and one cannot but conclude that the oil business is essentially the same as any other and as such is entitled to the same consideration." The above is the final paragraph of McNutt and Lambert's "First Principles of the Oil Business."

To many people the word "oil" is synonymous with graft and fake promotion schemes. Their knowledge of the oil industry has been acquired through crooked stock salesmen and other parasites of the real oil business.

The authors of the book, "First Principles of the Oil Business," have set forth in an entertaining and instructive way, the fundamentals of the great industry known as the oil business. They have given many pointers to warn the innocent against the unscrupulous sharks that precede and follow in the wake of oil fields throughout the country. They have shown that success in the oil business depends upon good judgment, experience, and the willingness to risk, just as in any other business.

The book is written for the many who know nothing about the oil industry, or the way in which oil companies operate. A pleasing style characterizes the work and the reader is not hampered in understanding its content by technical or statistical information.

Any one desiring to add to his stock of knowledge of the elementary principles of one of the United States' greatest industries, will thoroughly enjoy reading "First Principles of the Oil Business."

For sale by the Gulf Publishing Company, P. O. Box 1307, Houston, Texas.

E. C. Russell, employed by the Carter Oil Company, subsidiary of the Standard Oil Company (New Jersey), in the Burbank, Oklahoma, field, is leaving to continue work for the company in the Maracaibo district of Venezuela, in South America.

This Engine Stops Unless Compressor is Functioning

The compressor can go wrong and it is all the same to the crew on the Hamilton Corners lease of the Brundred Oil Corporation, near Titusville, Penna.

The reason is they have rigged up a water bucket to shut the current off, when the compressor ceases to function. So the engine never runs unless

This lease has a station with two engines and compressors for furnishing air power to force oil from the sand the compressor is functioning.

But the safety method is applicable to a gasoline plant, where men on the

These are the safety buckets on the compressor station of the Brundred Oil Corporation at Hamilton Corners Pennsylvania.

lease must leave the plant to perform work around the oil wells.

As shown in the illustration, there is a water bucket for each compressor, set over the cooling tower. Hot water from each compressor discharges into a bucket, which has a small hole in the bottom. But this hole is so small the bucket remains full and overflowing while the equipment is operating.

The bucket swings from a wire, which is attached to the spark wire at the engine. When the bucket is full, it pulls the wire tight and completes the circuit at the engine. When empty, the bucket raises and the current is disconnected.

So the equipment goes on hour after hour, with the water discharging into a bucket and overflowing down through the cooling tower. But let the compressor cease functioning and the flow of water ceases. Then the water drains from the bucket through the small hole in the bottom. When the bucket is empty, it raises and the current at the engine is shut off.

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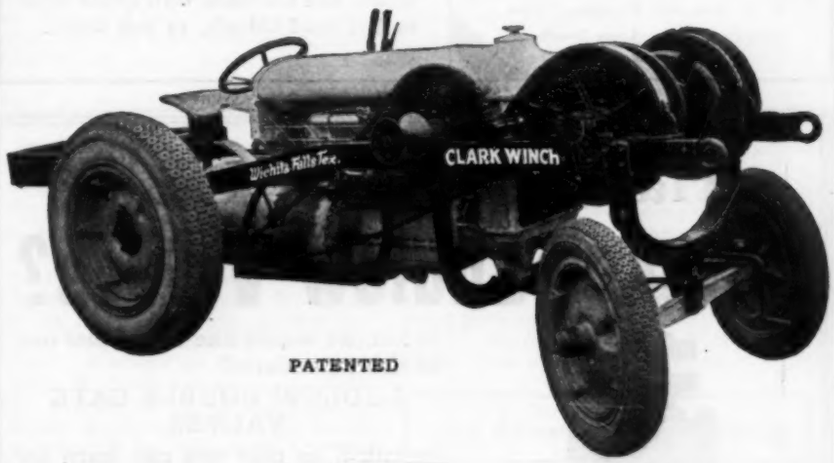

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Possibilities of New Deep Sand in Salt Creek Section Center of Much Interest

Denver, Colo., Oct. 6.—The potentiality of the new deep sand in the Salt Creek field in Wyoming, discovered in a well on a lease held by the Midwest Oil Company in section 23-40-79, remains the chief topic of interest and for the amount all but overshadows the development work in the Moffat pool and on Wellington dome and the Fort Collins area in Colorado. The Midwest Oil Company is a subsidiary of the Salt Creek Producers Association, Inc.

The Salt Creek Producers Association shares in almost equal proportions with the Mountain Producers Corporation the 3,000 or more acres which appear to be definitely proven for the new deep sand. In the event the productive area is broadened by future development work the two companies will share even more in the field's potential output.

As a means of determining the probable extent of this new deep sand, known as the Lakota formation, the Producers & Refiners Corporation of Denver, controlled by the Prairie Oil and Gas Company, is making preparations for deepening two of its wells in the Salt Creek field, one on the east and one on the west side of the structure. The first will be drilled in section 30-40-78 and the latter in section 15-40-79. Both of these locations are from 600 to 800 feet further down the slope of the structure than the Midwest Oil Company's discovery well. Both wells, too, are somewhat inside the 2600-foot contour that has been fixed by the United States Bureau of Mines as the water line.

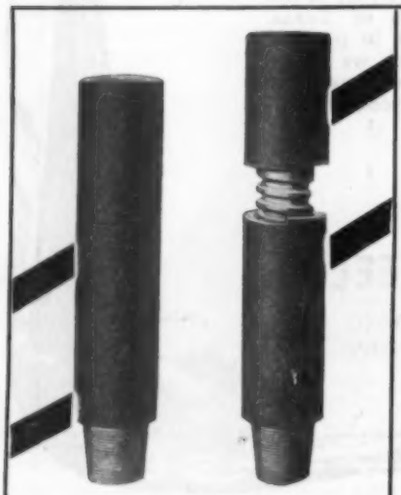
Another well that is to be drilled to the new deep sand is the well of the Wyoming Oil Fields Corporation, a subsidiary of the Mountain Producers Corporation, in section 35-40-79 in the Salt Creek field. This well is about 250 feet higher on the structure and from geological indications should be as good if not better than the deep sand discovery well. The company hopes to be able to complete this well to the Lakota formation in the next 30 to 40 days.

It is understood that reports made by engineers and geologists of the Midwest Refining Company of Casper and Denver are to the effect that estimates of the Lakota formation in that part of the Salt Creek field, based upon a complete saturation to a possible depth of 42 feet, would indicate that a potential yield of nearly 20,000 barrels of crude to the acre could be realized. The Midwest Refining Company operates the properties of the Salt Creek Producers and the Mountain Producers Corporation.

The marketing of the crude now being produced in the new pools of Colorado continues to be of major concern. The Prairie has already let a contract to the Hope Engineering & Supply Company of Mt. Vernon, Ohio, for ditching, lowering and covering its 4-inch line from the Moffat pool discovery well to Craig, the rail head from which point shipments of the Moffat pool crude are being made by tank car. The work on this project has been started.

There has been considerable talk here of negotiations being under way between the Sinclair Company and officials of the Union Oil Company of California for disposing of the crude from the Fort Collins and Wellington dome areas. Sinclair officials in Tulsa, however, are understood to have denied that the company has entered into any agreement with the Union for moving this oil nor have negotiations been under way looking to this end. In any event whatever means are employed to dispose of this crude will only be of temporary nature for it is believed that the Union itself will handle the Fort Collins output once the territory approaches a crude yield sufficient to warrant a pipe line expenditure.

What may be regarded as the first signs of development of the natural gas from the Midwest Refining Company's well near Berthoud in Colorado for industrial purposes is the application of the Rocky Mountain Gas Service Company to city officials of Loveland for a franchise. No decision has been reached by the city council.



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WILDCATS FROM ALL SECTIONS

Renew Efforts to Locate New Field Along Mexia-Corsicana Fault Zone

Corsicana, Texas, Oct. 6.—With daily production taking a steady decline in the four separate oil fields comprising the Mexia-Corsicana district, the operators are preparing to renew their efforts on a larger scale in the search for other producing structures in this fault zone, and are somewhat inclined to favor drilling blocks in a line between present fields, of near production. The wildcat leasing and drilling campaign launched early this year by most of the major companies and scores of independent concerns in the fault region extending across the state in a general northeast direction from the Corsicana-Powell field has been a complete failure to date, except for a commercial gasser from the Woodbine pay on the East Bazette structure, and not one of the numerous tests now under way offer immediate threats of uncovering a new field.

Although leasing and wildcat drilling will continue for months in the fault region extending northeast of the Corsicana-Powell field, the operators consider their opportunities more favorable for the discovery of new fields by exploring the leases located in a line between present fields, or drilling in the fault zone near established production. The development of the Richland field since the first of the year along the Mexia fault and between the Currie and south end of the Corsicana-Powell field is largely responsible for renewed interest being taken on wildcat leases located in a line between productive areas, as the Richland field has materially shortened the non-productive area that did exist between the Currie and Corsicana-Powell fields. The Richland field reached its peak in production last month by climbing to about 26,000 barrels daily, and has 77 flowing and pumping wells.

Now that the Richland field has been defined and almost completely developed, the operators are shifting their activities to the seven-mile stretch of acreage lying between the upper end of the Mexia field and the Currie field with hopes of shortening the non-productive interval between these two fields. At least five tests will be drilled in this area within the next few months, and three are getting under way south of the town of Wortham and near the Freestone-Limestone county line. The Boyd Oil Company has spudded a test on the N. B. Boyd land, Sarah McNulty survey, after having acquired about 500 acres in leases and considerable royalty interests. This test is located in Limestone county about 4,000 feet due west of the H. & T. C. railroad and three-eighths of a mile north of Tehuacana Creek. Magnolia contributed 75 acres off the south end of its N. B. Boyd lease to the Boyd Oil Company, providing that the location for the test would be within 200 feet of the former's property line. Southwest of the above location, Patty and associates are rigging up rotary to complete a deep test on the Hornbeck land, John Boyd survey.

Carter & Lytle et al are making a third attempt for production near Wortham, and are drilling 2500 feet north and slightly west of a dry hole they completed last May on the C. Hackney lease after cementing casing at 2963 feet and testing salt water at 3155 feet. This third test is on the J. J. Manning land, about one mile south of Wortham in Freestone county, and east of the railroad tracks. The Hackney failure encountered favorable showings of oil, and caused a flurry in leasing activity, with Humble taking the lead in buying up protection. Humble has since acquired considerable more acreage surrounding the town of Wortham, and is reported to have plans for a test. It is also reported that John Hooser and associates contemplate a test to be located on a block of about 1000 acres lying northeast of the wildcat being drilled by Carter & Lytle.

This territory between Mexia and Currie has contributed more than a dozen deep dry holes in recent years, but the locations were widely scattered leaving ample room for a producing structure to exist without having been touched by the drill. The logs of these deep holes have lately been correlated, and the information obtained is being used as a basis by the geologists employed by the above concerns in selecting the new locations.

The deep test getting under way near the famous Kosse short-lived gusher, located in the fault region southwest of Mexia, is creating a demand for leases along the Limestone-Falls county line. This new test is being drilled by C. W. Harrison and others on the J. W. Preston land, H. Anderson survey in Falls county, and several miles southwest of the Kosse discovery well. This test is being financed by selling off acreage, while Brandon & McCamey are drilling the hole for a quarter interest in the well and other considerations. Most all the major companies have taken protection around the test, while many independents have acquired leases and royalty interests, and prices are somewhat stiff. The initial performance of the famous Kosse well is still fresh in the minds of the operators seeking big flush production, and they are always eager for protection around any test drilling in this area, as hopes are held for a big field being uncovered some day.

An unusual heavy flow of salt water has been encountered by the Magnolia Petroleum Company's wildcat test on the George Antone farm, M. V. Delgado survey, near Talcy in the northwest part of Titus county, and late last week was flowing about 5000 barrels through 12½-inch casing after drilling broken sand from 590 to 990 feet. Cable tools are used on this test, and the 12½-inch casing is being underreamed to try and shut off the numerous layers of water sand. This heavy volume of salt water is unusual at such a shallow depth, and it is requiring a long string of casing to go through the water sand.

Marland Oil Company of Texas is operating two core drills on a block of wildcat leases surrounding the town of New Boston in Bowie county, and is reported to have ordered a third drill to expedite the work. When this block has been checked up Marland plans to core drill on a block of about 8,000 acres held under option south of the town of DeKalb in the west part of Bowie county. Humble Oil & Refining Company is also making a geological report on acreage around the town of New Boston.

J. C. McNeill et al's J. C. Harper 1, located in the J. S. Clift survey and ten miles north of Mount Vernon in Franklin county, is believed to be on the Woodbine sand at 2788 feet, and is only able to make about six inches of hole without changing fish tail bits. A depth of 2790 feet has been reached without showing oil, and cone bits are to be tried out early this week to try and speed up the drilling.

Simms to Drill Deep Test In Jim Wells County, Texas

Dallas, Texas, Oct. 6.—The Simms Oil Company is rigging up to drill a deep wildcat test on the Wade ranch in the Jim Wells County section of Southwest Texas. The location is about one mile north and slightly west of the town of Sandia, and four miles south of a wildcat gasser brought in some time ago by the Plateau Oil Company. Simms has about 11,000 acres under lease around its location.

San Antonio District Wildcats

COMPLETIONS

Company, Well and Location	Initial Production Bbls.	Depth
Webb County—		
Laurel Oil Co.'s No. 6.....	..	....
Nuevo Oil Co.'s No. 1, blk 50.....	110	....

DRILLING REPORT

BEXAR COUNTY—Aviator's Swearingen 1, dk. DeLange-Eiser Co.'s Tom 2, cemented 6-inch cas at 3015 ft. F. B. Slick's No. 1, dr. White & Hampton's Swearingen 1, dr.

CALDWELL COUNTY—Alonza Oil Co.'s Garcia 6, dr below 1590 ft. United North & South Oil Co.'s No. 1 and 2 Tiller, dr; Kelly 1, set casing below 3000 ft; Tabor 17, set 6⅝-inch cas 2086 ft. Echols et al's Fields 1, pre-

paring to set casing at 2180 ft. Miles et al's Tiller 1, dr 1700 ft. Thorman et al's Cole 1, dr below 2600 ft. Kittle & Green's Davis 1, dr below 3000 ft.

DUVAL COUNTY—Mirando Oil Co.'s No. 14, no report. Co-Operative Drilling Co.'s Dinn 1, preparing to set casing at 1874 ft. Humble Oil & Ref. Co.'s Walsh 3, no report. Mesquite Oil Co.'s No. 2, sd 1585 ft. Hill-Pierce Corp.'s Martinez 1, dr. Cole Pet. Co.'s No. 5, dr; 6 and 7, lcns.

GUADALUPE COUNTY — Walhunda Oil Co.'s Jones 1, dr below 2500 ft; Harris 1, dr near chalk. Grayburg Oil Co.'s Weinert 1, dr below 2000 ft. J. K. Hughes Dev. Co.'s Allen 20, set 6¾-inch casing at 2049 ft. Allen Burman's Wade Battle 1, dr 1746 ft. United North & South Oil Co.'s Baker 21, dr below 2000 ft; 22, setting casing at 1473 ft; 10-A Allen, dr out plug; McKean 18, cemented.

Magnolia Pet. Co.'s Schubert 11, dr. Pittman & Billingsley's Thomas 1, dk.

JIM HOGG COUNTY—Miami Oil Co.'s No. 1, dr. Henne-Winch-Farris' No. 3, dr. Laurel Oil Co.'s Palacious 2, preparing to resume dr at 1833 ft. McClannahan's Kinkler 1, dr below 1600 ft. Weber Oil Co.'s Holbein 4, dr 2700 ft. Shasta Oil Co.'s Holbein 1, dr 2188 ft.

KLEBERG COUNTY — Humble Oil Co.'s King 1, dr. Cross States Land Co.'s No. 1, dr.

LIVE OAK COUNTY—Grubstake Investment Assn.'s Nichols 3, casing set. McCoy's Ray Murray 1, lcn. Kerr, Gillette et al Lyne 1, dr.

McMULLEN COUNTY—San Balt Pet. Co.'s Shiner 1, dr below 300 ft. Southern Natural Gas Co.'s No. 9, dr; 10, lcn. Coquet et al's Hick's 1, dr. Pioneer Consolidated Pet. Co.'s Martin 1, dr. Grubstake Investment Assn.'s J. T. Calliham 2, sd; Jacobs 3, dr; Tom Brown 4, lcn; Fisher 1, conditioning. South Texas Oil Co.'s Cox 4, rigging up. Burt Maas Oil Co.'s J. T. Calliham 2, dr. Charles A. Snapp's Shiner 1, dr below 4000 ft. Three Rivers Oil Co.'s Calliham 3, lcn. George Pickett's Jacob 1, set 12¼-inch casing. Coyle-Concord Oil Co.'s No. 4, dr. Black Panther Oil Co.'s Nichols 1, dk.

WEBB COUNTY—Magnolia Oil Co.'s Ochoa 5, dr; 12, dr 1050 ft; 8, cemented; 9, dr in. Christine Sprague et al's No. 1, blk 13, Sur. 1664, sd 2150 ft. Kirkpatrick-Lucas Trusteeship's No. 2, blk 20, Ojuelos ranch, bailing; 3 and 4, dks. Richmond-Garcia's No. 7, sur 605, set casing at 1670 ft. Chandler & Gier's Ochoa 4, set casing; 7, set casing. A. D. J. Synd.'s Pratt 2, sur 1127, reported abn 5033 ft. Carolina-Texas Oil & Gas Co.'s No. 6, dr below 3786 ft. H. H. Palmer Synd.'s Walker 1, blk 29, Ochoa, dr below 1700 ft. Allsworth Bros.' No. 2, dr below 1400 ft; 4, set casing. Moore-Kirkpatrick (Homer & Tyson) No. 2, dr below 1700 ft. Cole Pet. Co.'s Cuellar 5, dr below 500 ft; 6, dr below 100 ft. Boyd Oil Co.'s Petty 1, dr 3320 ft; Brown 1, dr 2750 ft. Carnahan Prod. & Ref. Co.'s No. 60, set casing at 1618 ft; 6, blk 10, dk; 18, sd 1600 ft. Weber Oil Co.'s Holbein 4, setting casing at 2708 ft. Olean et al's No. 4, blk 49, dr in; 5, dr. Archer Drilling Co.'s No. 1, blk 20, dr. Iowa-Texas Prod. Co.'s No. 1, dr below 2200 ft. Alonzo Oil Co.'s No. 7, dr 1510 ft. Barnhart et al's No. 1, sur 1264 ft, dr below 500 ft. Cornhuskers Oil Co.'s No. 1, bailing; 3, dr; 5, dk. Weslaco Oil Co.'s No. 5, dr. Carson et al's No. 1, sur 688, dr. Witherspoon Oil Co.'s No. 1, Sur 50, preparing to spud in. Simms Oil Co.'s No. 1, sur 19, lcn. Nuevo Oil Co.'s No. 1, blk 50, producing 110 bbls. Wolcott Morgan et al's No. 1, sur 688, dr below 600 ft.

ZAPATA COUNTY—H. J. McMullen's Nos. 1, 2 and 3 Serapio Vela, lcns. B. K. Bateman et al's No. 1, sur 617, dr. Mirando Oil Co.'s No. 15, Sur. 307, setting 6-inch casing at 1860 ft. Killam Interests' No. 1, Sur. 307, set casing at 1664 ft. Hill et al's No. 1 Haynes ranch, dr.

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Coastal Wildcats

BRAZORIA COUNTY—Sinclair Oil & Gas Co.'s Perry 1, Stratton Ridge, S. F. Austin ½ league sur, on Prairie farm, salt below 2539 ft; Sinclair-Gulf Cave 1, NE side of mound, dr 4206 ft in hard sand and lime rock. Associated Oil Co.'s Perry 1, at Stratton Ridge, S. F. Austin sur, S shore of Chub lake, cleaning out at 4309 ft, td 4351 ft. D. F. Bryan Production & Hamm et al's Bryan 1, at Freeport, J. G. McNeel sur, reaming below 1700 ft with 9⅞ inch bit, td 2911 ft. Hamm et al's Bryan Estate 1, Damon Homestead sur, T. H. Bryan Estate, milled out 6 inch cas and are sdtr at 1100 ft, td 1200 ft.

FORT BEND COUNTY—Jas. W. Rich et al's Moore-Hager 2, at Big Creek, 300 ft NE No. 1, SE side of dome, lcn. Texas Company's Fee 1, at Big Creek, 2100 ft NE of W cor and along NW line, and 50 ft SE at right angles from Texas Company's N line, lcn. Pathfinder Oil Co.'s Davis Estate 4, Philo-Fairchilds sur, dr below 700 ft.

GALVESTON COUNTY—Gulf Production Co.'s Geo. E. Smith 1, at High Island, sd for water.

GRIMES COUNTY—L. F. McCausland et al's Dodd 1, 3 miles W of Iola, fourt showing of gas at 1770 ft, dr below 1800 ft.

HARRIS COUNTY—Dome Dev. & Petroleum Co.'s Schneider 1, at Piney Point, Schneider farm, Jno. D. Taylor sur, blk 41, dr 800 ft in gumbo.

HOPKINS COUNTY — Texas Company's Worsham 1, Jack Worsham 875 acre tract, Sam

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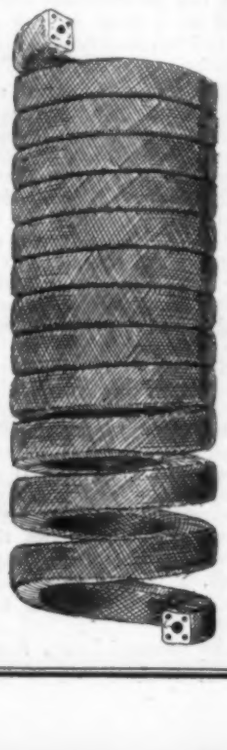

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JACKSON COUNTY—Vanderbilt Petroleum Co.'s Sefiner 1, 4 miles N of Vanderbilt, on C. W. Hall sub-division of Harwood-Burns ranch, preparing to take core at 2614 ft.

JEFFERSON COUNTY—Houston Oil Co.'s Gulf-Pipkin 51, Pipkin and Davis sur, dr 2511 ft in gumbo and lime; Sun-Pipkin 1, Pipkin and Davis sur, dr 2180 ft in hard lime rock.

LIBERTY COUNTY—Texas Company's Ott 1, NE side of Gum Thicket, 2375 ft S and 772 ft W of NE cor of J. C. Ott 345 acre lease, td 378 ft, set 10 inch cas and waiting for cement to set.

MILAM COUNTY—Sinclair Oil & Gas Co.'s Smith 1, Smith-Turney structure, 7000 acre blk, 300 ft N and 300 ft W of NW cor R. N. Turney 162 acre lease, land of H. F. Smith, Jr., rig up, laying water line.

Central West Texas Wildcats

COMPLETIONS

Company, Well and Location	Initial Production Bbls.	Depth
Mitchell County—		
The California Co. W. H. Abrams (T&P) 6	125	3080
Reagan County—		
Mid-Kansas & Transcontinental McIntosch 1	*	3433

DRILLING REPORT

BROWN COUNTY—M. T. Anderson-Moore et al's Wheeler 1, sd for cas 2575 ft. Chas. S. Avery et al's Cox 3, co after second shot 2540 ft. Davis & Swartz's Newton 1, dr 655 ft. Gully & Griffin's Cox 1, dr 365 ft. Honea et al's E. DeBusk 2, sd 1900 ft. Leonard et al's Prather 2, sd 2370 ft. McMurray et al's Newton 2, machine. Moore & Wilson's Westerman 1, testing 1285 ft. Omaha Southern Oil Co.'s G. B. Gaines 2, sd 1840 ft.

CALLAHAN COUNTY—Blair et al's Cathey 5, dr 1220 ft. Chas. Dutton et al's Carter 1, sd 890 ft; Harwell 1, sd 800 ft; Cathey 5, timbers; Cathey 6, dr 715 ft; Cathey 7, rig. Dudley Oil & Gas Co.'s Hugh Hoore 1, water trouble 1853 ft. Hickey et al's E. L. Findley 2-A, rig. Junior Oil Co.'s A. L. Huntington 1, sd 2280 ft. Kellogg Drilling Co.'s Snyder 1, dr 1835 ft. McMath et al's Isenhower 1, spd and sd. Prewitt et al's Bailey 1, dr 1880 ft; Betcher 1, dr 2300 ft; Crane 1, dr 1010 ft; White 1, dr 1680 ft; Windham 1, dr 1015 ft. Shackelford et al's Chas. Allen 1, dr 1820 ft.

COLEMAN COUNTY—Archie Shaw et al's J. R. Adams 1, (A. Wickson sur) lcn.

PALO PINTO COUNTY—Broderick & Calvert's H. L. Mosely 1, making gas 2375 ft. J. D. Cranford et al's L. Smith 1, spd and sd. Morris Frazar et al's O. W. Pollard 1, (Sec. 43, T&P Blk. 3) dr 2450 ft. Kerman Oil Co.'s T. H. Kerman 1, lcn. McKinney et al's Marsden 1, sd 465 ft. S. W. Manning et al's R. Hitson 1, sd 3640 ft. Phillips et al's Stringer 1, spd and sd. Phillips & Graham's J. A. Caudill 1, sd 3800 ft. Pender Production Co.'s Slemmons 2, rig. E. B. Ritchie & Ed. S. Britton's Strawn Coal Fee 2, dr 2850 ft. B. H. Talbert et al's Slimp 1, sd 625 ft.

PARKER COUNTY—Chas. Wooldridge et al's B. C. Evans 1, (2 miles south of Whit) rig.

SOMERVELL COUNTY—Glenrose Oil & Gas Co. et al's J. R. Buzan 1, (4½ miles SW of Glenrose) dr 450 ft.

BORDEN COUNTY—Reeves-Parkhurst et al's A. J. Long 1, sd at contract depth, 3209 ft.

BREWSTER COUNTY—Tesnus Oil Corp.'s A. S. Cage 1, (Sec. 1, Blk. 348) sd 2555 ft. Arco Development Co.'s H. L. Kokernot 1, sd 3775 ft. Brewster Oil Co.'s W. H. Kokernot 1, sd 2535 ft. Portland Oil & Gas Co.'s State 1, sd 3050 ft. Nine Points Oil Co.'s Peralto & Finnell 1, sd 1570 ft.

COKE COUNTY—Ace Oil Co.'s W. C. Locke 1, spd and sd. Sward & Laller's J. R. Mims 1, lcn. Mexia-Equitable Oil Co.'s W. J. H. Hodges 1, sd 2505 ft.

CONCHO COUNTY—Dome Production

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H-3-A

ENGINEERS CONTRACTORS HOPE Engineering & Supply COMPANY DESIGNERS MANUFACTURERS

MT. VERNON, OHIO, U. S. A.

Co.'s Mrs. C. M. Hartgrove 1, testing oil sand after shot, td 1430 ft; Hartgrove 2, lcn. Schultz Oil Co.'s W. O. Schultz 1, sd 3220 ft.

CRANE COUNTY — Texas Development Co.'s Jax Cowden 1, dr 1970 ft.

CROCKETT COUNTY — Crockett Drilling Synd.'s Robt. Massey 1, fsh tools 1640 ft; J. M. Shannon 2, lcn. World Co.'s L. P. Powell 1, fsh bit 845 ft. W. E. Ball et al's J. S. Todd 1, lcn.

CULBERSON COUNTY—David Flood et al's McAlpine et al 2, lcn. J. D. Wesner et al's Mack Sayles 1, sd 3105 ft.

DAWSON COUNTY — Lamesa Oil Co.'s John Burns 1, sd 2150 ft.

ECTOR COUNTY—Farmers Oil Co.'s Andy Newham 2, sd 1400 ft.

FISHER COUNTY—Pyron Oil Co.'s J. S. McCall 1, sd 3125 ft.

GARZA COUNTY—B. V. Blackwell et al's J. M. Boren 1, sd 2110 ft. Union Pet. Corp.'s C. C. Connell 1, sd 750 ft.

GLASSCOCK COUNTY — Cushing Ranch Drilling Assn's W. H. Sparkman 1, sd 1950 ft. A. C. Varner et al's C. I. Brunson 1, sd 3435 ft. General Oil Co.'s L. S. McDowell 3, dr 1210 ft. M. McDonald et al's L. S. McDowell 1, lcn.

HUDSPETH COUNTY — Boole Oil Assn's Gardner et al 1, sd 1540 ft. Wm. Loftus et al's Minnie Veal Slaugthter 1, sd 1300 ft. Hueco Basin Oil Co.'s University 1, sd 1560 ft.

HOWARD COUNTY—Big Springs Oil Co.'s Mable O. Quinn 1, sd 3640 ft.

IRION COUNTY—Orient Oil Co.'s J. D. Sugg 1, (star machine) dr 810 ft.

JONES COUNTY—Anson Oil & Dev. Co.'s C. B. Brown 1, sd 1855 ft. C-H Oil & Development Co.'s J. A. Cullom 1, sd 3500 ft.

KARNES COUNTY — Alidor Oil Co.'s A. W. Hyatt 1, spd and sd.

LOVING COUNTY—J. J. Wheat et al's N. E. Chapman 1, sd 400 ft. Ramsey Prod. Co.'s Russell 1, sd 4485 ft; Russell 2, sd 810 ft.

MITCHELL COUNTY—The California Co.'s Clark 1, rig; E. Morrison (Lse. 5) 11, swabbing 90 bbls oil 3015-80 ft; W. H. Abrams (T&P) 7, rigging up. M. E. Eddleman et al's A. C. Gist 1, fsh bit 2855 ft. Sloan Oil Co.'s H. C. Miller 2, sd 1265 ft. Chal. Daniel et al's W. D. Kynard 1, rig. Morrison-Rowe Lease Synd.'s W. D. Kynard 1, dr 1750 ft. I. B. Humphreys et al's P. C. Coleman 1, fsh bit and cas 1965 ft. J. T. Harris et al's W. C. Brown 1, showing oil 370 ft; Brown 2, machine.

PECOS COUNTY—Arkansas Fuel Oil Co.'s Blackstone & Slaughter 1, rig. Tras-Pecos Oil Co.'s H. L. Thomas 1, fsh tools and cas 1830 ft; W. W. Turney 1, sd 2905 ft; Bennett et al 1, sd 1245 ft; Johnson-Troy 1, sd 2965 ft. Southern States Lease & Prod. Co.'s J. M. Odem 1, sd 1205 ft.

PRESIDIO COUNTY—Tesnus Oil Corp.'s (was Claude Byler) Toole Estate 1, sd 965 ft.

REAGAN COUNTY—Big Lake Oil Co.'s University 12, (Sec. 36, Blk. 1) dr 2020 ft; University 13, (Sec. 12, Blk. 2) dr 240 ft; University 14, (Sec. 1, Blk. 2) rigging up; University 15, (Sec. 12, Blk. 2) dr with rotary 265 ft. Arkansas Fuel Oil Co.'s University 1, (Sec. 9, Blk. 6) dr 2600 ft. B. H. Cogdell et al's University 1, (Sec. 23, Blk. 8) lcn. Crockett Drilling Synd. et al's University 1, (Sec. 9, Blk. 9) dr 700 ft. Transcontinental Oil Co.'s University 1, (Sec. 10, Blk. 1) rig. Texon Oil & Land Co.'s University 1, (Sec. 22, Blk. 9) dr 3045 ft; University 2, (Sec. 26, Blk. 9) timbers. The California Co.'s University 1, (Sec. 13, Blk. 8) lcn. P. H. Hoffman et al's University 1, (Sec. 23, Blk. 11) rigging up. C. J. Wrightsman et al's Ingham 1, (Sec. 39, Blk. "C", L. & S. V. Ry Sur) sd for 15½ cas 305 ft. University Oil Co.'s University 1, (Sec. 17, Blk. 10) rigged up.

REEVES COUNTY — Dixieland Oil Co.'s Oates 2, sd 4505 ft. W. S. Troy et al's H. G. Hersheusen 1, sd 415 ft. Bell Reeves Oil Co.'s Finley 1, sd 1540 ft. El Paso-Saragosa Oil Co.'s Geo. Wirt 1, sd 540 ft. Parker-Hancock Oil Co.'s Johnson 1, sd 1930 ft. Willoughby Pet. Co.'s W. D. Cowan 1, sd 610 ft. Rodenbaugh & O'Connell's W. D. Casey 1, sd 845 ft. Pecos Pet. Co.'s Johnson 1, sd 1930 ft. Texas Drilling Co.'s Pecos Valley 1, sd 1105 ft. Dome Drilling Synd.'s Ira J. Bell 1, lcn.

RUNNELS COUNTY—Subscribers Association's R. R. Russell-Giesezke 1, making 5,000,000 cu. ft. gas 2590-98 ft, setting 6⅝ cas to deepen.

SCURRY COUNTY—Camp Springs Oil & Ref. Co.'s W. Y. Jones 1, sd 600 ft; J. O. Quinn 1, sd 3570 ft; L. E. Howell 1, lcn. Hermleigh Oil & Gas Co.'s J. W. Burris 1, sd 2965 ft. Stanton Oil & Gas Co.'s J. W. Riley 1, sd 3500 ft.

STERLING COUNTY — Chicago-Texas Oil & Gas Co.'s D. C. Durham 1, sd 1427 ft; Durham 2, dr 1345 ft. Co-Operative Lease & Dev. Co.'s Douthitt 1, sd 1775 ft. Fidelity Oil Co.'s G. R. Hull 1, sd for cas 1640 ft.

STONEWALL COUNTY—Elder Nance et al's Ward Estate 1, dr 500 ft.

TAYLOR COUNTY — Sanger Oil & Ref. Co.'s McClure 1, lcn; Tom Sawyer 1, sd 2700 ft; S. P. Hollingshead 1, rig.

TERRELL COUNTY—R. E. Dunn et al's Co-Operative Inv. Co. Fee 1, lcn. Southwest Texas Oil & Gas Co.'s S. W. T. No. 1, sd 3515 ft.

TOM GREEN COUNTY — Ranger Investment & Dev. Co.'s Harris 1, sd 3370 ft.

UPTON COUNTY—W. P. Morris et al's H. M. Halff 1, dr 375 ft.

VAL VERDE COUNTY—East Del Rio Oil Co.'s Russell 1, sd 1800 ft. Independent Operator's W. F. & W. E. Whitehead 1, sd 2200 ft.

WARD COUNTY—Arthur Pitts Oil Co.'s Soda Lake 1, sd 2205 ft; River 1, sd 4675 ft. Cook & O'Brien's G. W. O'Brien 1, sd 1175 ft. Trans-Pecos Oil Co.'s Longnecker 1, sd 1765 ft.

East Central Texas Wildcats

ANDERSON COUNTY — Roeser Petroleum Co.'s J. D. Via 1, (Isaac Simpson sur) fsh stuck drill stem, td 4411 ft.

BOWIE COUNTY—Boyd Oil Co.'s C. H. Thompson 1, (Jacob Barkman sur) spudding. E. B. Guest et al's A. Hooks 1, (John Bark-

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man sur) dr 1500 ft. Mission Oil Co.'s W. H. Nelson 1-A, (Nancy Dycus sur) Pecan Gap chalk 1435-1950 ft, testing Blossom 1955 ft. George B. McCullough & Roell's W. R. Williams 1, (L. M. Rice sur) spd and sd. Williams et al's Daulby 1, sd 2050 ft.

FALLS COUNTY (Kosse District)—C. W. Harrison et al's J. W. Preston 1, (H. Anderson sur) spd and sd.

FRANKLIN COUNTY—J. C. McNeill et al's J. C. Harper 1, (J. S. Clift sur) testing Woodbine sand 2790 ft.

FREESTONE COUNTY—Carter & Lytle's Manning 1, (Sarah McNulty sur) sd for water 1235 ft.

HENDERSON COUNTY—Fred E. Haynes et al's E. G. Bounds 2, (Henry Jeffreys sur) sd 1948 ft.

HOPKINS COUNTY—The Texas Co.'s G. W. Payne 1, (A. Douthitt sur) spd and sd. Gulf Production Co.'s W. J. Davis 1, (Jas. Clark sur) lcn. C. A. Kelsey et al's Addie Brooks 1, (D. Dowdle sur) sd 1605 ft. Bar-Tex Drilling Co.'s C. H. McClure 1, (D. Waggoner sur) rig. Stough & Potts' J. P. Fitzgerald 1, sd 900 ft.

HUNT COUNTY—Gulf Production Co.'s C. M. Cannon 1, (Robt. Ragsdale sur) dr 700 ft. Sam Tallall & Kelsey's J. W. Barnett 1, (Alex Smith sur) dk.

KAUFMAN COUNTY—Judge Germany et et al's W. S. Kirby 1, (S. Edens sur) sd 2896 ft.

LAMAR COUNTY—Interstate Oil Co.'s Ben Haynes 1, (Larkin-Rattan sur) steel dk.

LIMESTONE COUNTY—Boyd Oil Co.'s N. B. Boyd 1, (Sarah McNulty sur) spd. W. T. Church et al's R. Kennedy 1, (P. Varella sur) Austin chalk 2281-2595 ft, dr 2740 ft. Patty et al's Hornbeck 1, (John Boyd sur) rigging up. Hamil Drilling Co.'s Roscoe Cook 1, (P. Varella sur) dr sandy shale 3620 ft. Z. Gardner et al's E. M. Speight 1, (P. Varella sur) dr chalk 3075 ft.

NAVARRO COUNTY—Boyd Oil Co.'s C. R. McCowan 1, (Morris Webb sur) sd 3248 ft. Patrick & Illseng's W. L. Roberts 1, (Jos. Mayor sur) sd 1740 ft. Gilbert Johnson et al's J. W. Greer 1, (G. Rushian sur) dr 1700 ft.

RAINS COUNTY—Mrs. Ferguson & Short Bros.' W. D. Peeples 1, (F. A. Tibbles sur) spd and sd.

ROBERTSON COUNTY—J. C. Bland et al's A. W. Wilkerson 1, (Francisco Ruiz sur) 3 miles east of Hearne, dr 4210 ft.

RED RIVER COUNTY—Johnson Pet. Co.'s Antone & Worley 1, (Robt. Gamble sur) dr 2885 ft.

TITUS COUNTY—Magnolia Pet. Co.'s Geo. Antone 1, (M. V. Delgado sur) flowing about 5,000 bbls salt water, dr with cable tools 1015 ft.

VAN ZANDT COUNTY—Golden Oil Co.'s J. D. Adrian 1, (Hallmark sur) top Austin chalk, 2714 ft, dr in chalk 2865 ft.

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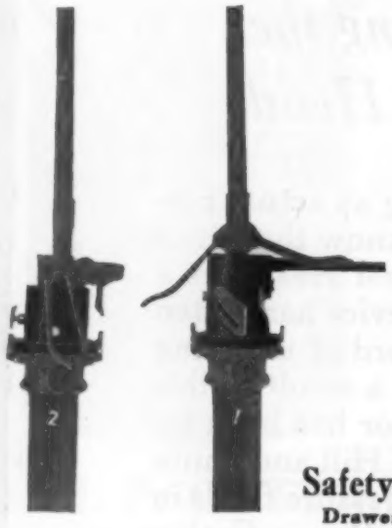

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Arkansas Wildcats

COMPLETIONS

Company, Well and Location	Initial Production Bbls.	Depth
Ouachita County—		
Peltier et al's Eagle Mills 2, 25-13-16	*	2693
Union County—		
All Day Drilling Co.'s Moore 1, 33-18-17	*	3002
Jeter Trust's Burnside 1, 33-17-13	*	3055

DRILLING REPORT

CLARK COUNTY — Southern Drlg. Co.'s Burrows 1, 35-10-20, dr 620 ft.

CLEVELAND COUNTY — Markel Synd.'s Plummer 1, 22-9-10, sd 2666 ft.

COLUMBIA COUNTY—Brown et al's Robinson 1, 23-18-23, sd 3034 ft. Hargis et al's Souter 1, 24-17-22, sd 35 ft. Heath Trust's Williams 1, 1-19-21, coring 2175 ft. Johnson et al's Sailles 1, 18-17-22, sd 915 ft. Kemp et al's Emerson 1, 7-19-19, sd 630 ft. Miller et al's Watts 1, 20-16-18, abn 1890 ft. Phillips et al's Davis 1, 15-18-21, dr 810 ft.

DALLAS COUNTY—Durr et al's Riggs-Matlock 1, 33-8-15, sd 2400 ft.

DREW COUNTY—Graves et al's Karnes 1, 20-14-6, sd 2386 ft. King & Wilson's Trotter 1, 12-13-6, sd 1250 ft. Ratcliff et al's Spencer 1, 21-14-7, sd 1650 ft. Rhodes et al's Harris 1, 5-13-8, sd 2107 ft. Spooner et al's Meyer 1, 4-16-7, sd 50 ft.

GRANT COUNTY—Arnold & Hill's Meeks 1, 8-4-11, dk. Haley & Evans' Pike 1, 8-6-11, sd 50 ft.

HEMPSTEAD COUNTY — Fullilove Drlg. Co.'s Ford 1, 31-14-23, dr 1325 ft. Hempstead Oil Co.'s Nicholls 1, 17-11-25, fsh 1890 ft. Simmons Trust's Adams 1, 36-12-27, re-set 4½-inch 2700 ft.

LA FAYETTE COUNTY — Ken-Saw Pet. Co.'s Red River Lumber 2, 3-29-24, dk.

LINCOLN COUNTY—Bennett et al's Jones 1, 33-10-6, dk.

LITTLE RIVER COUNTY—Gaines et al's Thomas 1, 15-13-29, dr 3240 ft. Grote et al's Allen 1, 2-13-29, dr 3000 ft. Johnson et al's Hawkins 1, 10-11-31, sd 1350 ft. Red River Valley Oil Co.'s Taylor 1, 29-13-29, sd 2790 ft.

LONOAKE COUNTY—Fletcher-Gates Dev. Co.'s Fletcher 1, 13-15-8w, sd 2265 ft; to drill another test 4½ miles northeast.

MILLER COUNTY—Kress et al's Thompson 1, 33-14-28, sd 917 ft.

NEVADA COUNTY—British Allied Interest's Fee 1, 31-11-21, dr 1865 ft. Greeson et al's Lester & Mills Lumber 1, 3-11-20, dr 1465 ft. Kan-Ark Oil Co.'s Honea 1, 12-13-21, sd 1564 ft. Lockhart et al's Porter-Cornelius 1, 17-10-22, dr 1135 ft. Murray et al's Eaves 1, 11-12-23, dr 1250 ft. Prescott Oil Co.'s Henry 3, 10-12-20, sd 1000 ft. Wortham & Orr's McKinney 1, 14-14-21, lcn.

OUACHITA COUNTY—Dee et al's Criner 1, 21-15-19, dk.

UNION COUNTY—Berry et al's Union S. M. 1, 14-19-11, sd 875 ft. Harrell Trust's Teele 1, 11-19-12, sd 3177 ft. Traffic Oil Co.'s Goodwin 1, 20-16-14, sd 3026 ft.

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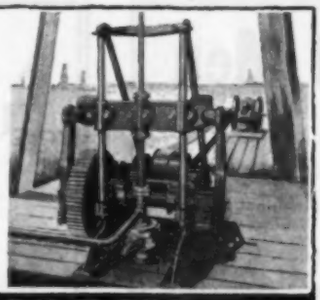

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Louisiana Wildcats

COMPLETIONS

Company, Well and Location	Initial Production Bbls.	Depth
Caddo Parish—		
Adams et al's Johnson 1, 16-14-16..	*	2653
West Carroll Parish—		
Arknasas Fuel Oil Co.'s Bain Wagon 1, 8-21-10e	*	3002

DRILLING REPORT

BIENVILLE PARISH — Borden et al's Thomas 1, 8-16-9, sw 2277-80 ft; to deepen. Roxana Pet. Co.'s Bryan 1, 30-17-6, dk.

BOSSIER PARISH—Armistead et al's Bernstein 1, 11-20-13, sd 1180 ft. Atlantic Oil Production Co.'s Bodcau Lumber Co. 1, 24-23-12, re-setting casing 2716 ft. Collins et al's Crawford 1, 14-19-11, lcn. Weatherbee et al's Bolinger 1, 31-23-11, set 12½-inch cas 206 ft. Webb et al's Catlett 1, 27-19-11, coring 1066 ft.

CADDO PARISH — Ark-Caddo Oil Co.'s Nickerson 1, 30-19-15, sd 2450 ft. Brewer et al's Sharp 1, 10-18-16, rig. Caddo Western Gas Co.'s Gardner-Blades 1, 2-16-15, r 2865 ft. Collins et al's Levy 1, 23-19-14, sd 2549 ft. Crude Oil Co.'s Alexander-Ledbetter 1, 27-16-14, sd 3666 ft. Gulf Ref. Co.'s Ferry Lake 216, 14-20-16, deep test, dr 3850 ft. Louisiana-Texas Community Oil Co.'s McCoy 1, 15-23-16, coring 3077 ft. Proven Prod. Co.'c Agurs 1, 6-16-16, set 8-inch 1049 ft. Richardson Oil Co.'s Bickham 1, 15-18-15, rig. Wilson Synd.'s (Lorraine Oil Co.) Bryson 1, 18-17-16, set 6-inch 910 ft; tested 22 million cu. ft. gas at 944 ft.

CALDWELL PARISH—Culver et al's Culver 1, 21-14-4e, sw 2668 ft.

CLAIBORNE PARISH — Black O. & G. Co.'s Aubrey 1, 20-21-8, sd 1450 ft. Claiborne Lincoln Synd.'s Fields 3, 22-19-5, lcn. El Dorado-Chief Oil Co.'s McElwee 1, 13-22-7, dr 1165 ft. Gulf Ref. Co.'s Palmer 1, 35-23-6, dr 2490 ft. Pomeroy et al's Hurman 1, 34-20-6, dr 840 ft.

DE SOTO PARISH — Greyhound Synd.'s Pollack 1, 36-11-14, dr 2500 ft. Tarver et al's Hewitt-Hicks 1, 10-11-14, dr 2730 ft. Wright et al's (Texas-Standard) Sutherland 2, section 18-12-14, abn 10-20-21 at 2614 ft; have rebuilt derrick and are rigging up to deepen.

GRANT PARISH—Grant Parish Pet. Co.'s Ball 1, 1-7-1w, washing to bottom, 2250 ft.

LA SALLE PARISH—Bur-Ban Oil Co.'s Urania 2, 21-11-2e, sd 1790 ft. Columbia O. & G. Co.'s Urania Lumber 1, 22-10-2e, sd 200 ft. Gulf Ref. Co.'s Urania 1, 22-11-2e, dk; Urania A-1, 22-11-2e, sd 1022 ft. Stovall Drlg. Co.'s Louisiana-Central Lumber 2, 27-10-2e, sd 2000 ft. Urania Pet. Co.'s Urania 4, 20-10-2e, sw, sd 1573 ft.

LINCOLN PARISH—Buckner et al's Barrett 1, 13-20-3w, sd 1220 ft.

RED RIVER PARISH—LeGrande et al's Fee 3, 2-14-12, sd 2440 ft.

UNION PARISH—Cargile et al's Heard 1, 21-21-2w, sd 2409 ft. Clark & Melat's Feazel 1, 6-19-2e, rig. Roxana Pet. Co.'s Voss 1, 18-22-2w, lcn.

WEBSTER PARISH — Bethany O. & G. Co.'s Wiley 1, 1-22-10, rig. Butler-Murray Drilling Co.'s Baker 1, 34-23-11, dk. Haenlen et al's Roberts 1, 9-23-10, dk. McDowell et al's Hortman 1, 15-20-10, set 10-inch 130 ft.

WEST CARROLL PARISH — Orion Oil Co.'s Bain Wagon 1, 23-23-10e, fsh 3375 ft.

North Texas Wildcats

COMPLETION

Company, Well and Location	Initial Production Bbls.	Depth
Throckmorton County—		
Humble Oil & Ref. Co.'s J. L. Stubblefield 1	100	3198

DRILLING REPORT

BAYLOR COUNTY — Batchelder & King's E. S. Wallace 1, sd 100 ft. Crittenden et al's Hawkins 1, sd water 1615 ft. Dallas Oil Co.'s

OIL FIELD EQUIPMENT

Shawver Bros. 1, sd 1725 ft. C. B. Jetter et al's F. Gatzki 1, sd 600 ft. Leman et al's Shawver Bros. 1, sd 175 ft. D. H. Moore et al's H. H. Fancer 1, testing sand 960-65 ft. Richardson Bros. et al's Wallace Est. 1, dk.

CLAY COUNTY—Atlantic City Prod. Co.'s Scaling 1, co 2890 ft. Bowen & Ross' Stine 1, sd 1880 ft. Burton & Ruff's Mrs. J. W. Harding 1, dr 600 ft. Callender & Cumley's Stine 1, sd 1790 ft. J. T. Cumley's N. C. Camp 1, rigged up. L. R. Dixon et al's R. H. Godfrey 2, rigged up. Gulf Production Co.'s C. M. Worsham 4, (rotary) dr 2810 ft. Hart & McKenna's Stine 1, sd 2000 ft. Lone Star Gas Co.'s Lockridge subdiv 2, dr 500 ft; Withers subdiv 4, dr 900 ft. Morris & D'Yarmitt's J. Stephenson 1, dr sand 1250 ft. J. O'Neil's O. A. Ross 1, dr 1500 ft. Piedmont Oil Co.'s C. Dean 1, dr 710 ft. Shelton Oil Co.'s H. Boddy 1, testing sand 1228 ft. Somers & Nantz's Mary C. Parker 1, dr 260 ft.

COOKE COUNTY — Big Indian Oil Co.'s W. B. Davis 1, sd 3445 ft. Red River Drilling Co.'s Whaley Jones 1, sd 1255 ft.

DENTON COUNTY — Arbuckle Asphalt & Pet. Co.'s Kate Fonteberry 1, sd 500 ft. Hillcrest Oil & Dev. Co.'s J. H. Rayzor 1, sd 1350 ft.

FOARD COUNTY—Landreth Prod. Co.'s F. Halsell 1, fsh cas 3300 ft.

GARZA COUNTY—B. V. Blackwell et al's J. M. Boren 1, dk rebuilt, td 2110 ft. Union Pet. Corp.'s C. C. Connell 1, sd 750 ft.

GRAYSON COUNTY—Zee Tex Oil & Dev. Co.'s G. W. Cannon 2, sd 3000 ft; Griffin 1, sd 2325 ft.

KNOX COUNTY—Brazos Bend Oil Co.'s J. E. Clark 1, sd 2020 ft. Evans et al's Ella Lawson 1, sd 765 ft.

MONTAGUE COUNTY — Boyd Oil Co.'s Mrs. M. H. Salmon 1, sd 902 ft, est 75 bbls. Guaranty Fund Oil Co.'s E. A. Jordan 1, dd, dr 2860 ft. Gulf Production Co.'s M. E. Benson 1, (rotary) dr 2700 ft. Mascho Oil Co.'s J. L. Howard 1, sd 3650 ft. The Texas Co.'s I. A. Gist 2-A, fsh bailer 810 ft. Texhoma Oil & Ref. Co.'s O. Cato 1, lcn; N. J. Howard 1, sand 833-55 ft, preparing to pump. Otic C. Wood et al's Summerour 1, dr 1840 ft.

STONEWALL COUNTY — Elder Nance's Ward Est. 1, dr 500 ft.

THROCKMORTON COUNTY — Adams, Brown et al's Polk Co. Sch Ld 1, sd 1435 ft. Cragin et al's J. R. Burkhalter 1, sd 50 ft. Groves & Burton's Reynolds Land & Cattle Co. 1, sd 672 ft. Hamilton et al's J. T. Odell 1, dr 220 ft. Haughland et al's Mrs. A. McKnight 1, sd 725 ft. C. F. Kelsey's W. D. Housley 1, sd 50 ft. King et al's A. P. Broyles 1, fsh 520 ft. Bruce Larkin et al's R. E. Conger 1, sd, td 1430 ft, est 15 bbls; Mrs. T. S. Richards 1, rigging Star machine. Shamrock Oil Co.'s Mrs. A. McKnight 1, dr 1280 ft. W. A. Whatley et al's Parrott 1, co 565 ft. Young et al's Reynolds Cattle Co. 1, sd 275 ft. Young Bros. & Kennedy's A. B. Edsell 1, dr 1550 ft.

WILBARGER COUNTY—Barker & Hamilton's A. P. Morris 1, sd 305 ft. Bridwell & Heydick's W. B. Dill 1, flowing approximately 400 bbls per day, sand 2012-20 ft; W. H. Stephens 1, dr 500 ft; Stephens 2, dk. S. A. Castleberry et al's J. Bowers 1, sd 700 ft. Dill Farm Oil Co.'s W. B. Dill 1, dr 1900 ft. Dumas & Ellis' W. H. Stephens 1, set cas on sand 1330 ft. Hart et al's Smith 1, sd 1440 ft. Murchison & Pigg's Green 1, co 1025 ft. Noble Oil Co.'s W. T. Waggoner 1, dr 1825 ft. Prince Bros.' C. Zipperle 1, rigging up. South Vernon Oil Co.'s C. W. Richardson 1, sd 1275 ft. Winnipeg Oil Co.'s D. Bond et al 1, dr 1950 ft.

Texas Panhandle Wildcats

CARSON COUNTY — American Ref. Co.'s Burnett 2, (rotary) dr 2740 ft; Burnett 3, dr 1250 ft. J. Crosbie et al's Burnett 1, rigging up. Culbertson Bros. et al's V. B. Armstrong 1, sd 2975 ft. Danciger Oil & Ref. Co.'s Burnett 1, (rotary) dr 2700 ft. Cates Oil Co.'s Burnett 1, dr 2140 ft. Gulf Production Co.'s Burnett 4, dr 2940 ft; Burnett 5, lcn; Burnett 1-A, dr 2800 ft. Marland Oil Co.'s Burnett Est. 1, sd 500 ft. Olson Bros. et al's Burnett 1, dr 1860 ft. Premier Oil Corp.'s Burnett 1, sd 1300 ft. W. W. Silk et al's Burnett Est. 3, fsh 2900 ft. Skelly Oil Co.'s Burnett 1, flowing approximately 30 bbls per hour, sand 3090-98 ft; Burnett 2, dk. The Texas Co.'s Burnett 4, pulling liner, td 2955 ft; Mary C. Burnett 1, dr 2960 ft; Mary C. Burnett 2, 2nd hole, spd.

COTTLE COUNTY—T. J. Woodley et al's A. Dulaney 1, dr 2250 ft.

GRAY COUNTY—A. R. Anderson's C. W. Bradford 1, dr 200 ft. W. H. Holmes et al's J. S. Morse 2, dr 400 ft. The Texas Co.'s G. H. Saunders 1, fsh 2780 ft. Wilcox Oil & Gas Co.'s P. A. Worley et al 1, sd for storage, est 300 bbls, td 2925 ft; J. H. Wilson 1, (rotary) dr 2975 ft.

HUTCHINSON COUNTY — Amarillo Oil Co.'s L. Bivens 2-B, dr 1240 ft; R. G. Barnum et al's Johnson 1, lubricating off 50,000,000 cu. ft. gas, td 2860 ft. Dixon Creek Oil Co.'s H. C. Smith 1, dr 250 ft. Douglass Oil Co.'s J. A. Whittenberg 1, rigging up. Gulf Production Co.'s E. Cockrell 1, dr 3080 ft. H. T. McGee et al's Smith Capers 1, sd 3188 ft. Prairie Oil & Gas Co.'s Diana Shaw 1, lcn. Tex-O Oil Co.'s Johnson 1, trying to shut off water, td 1175 ft. Twin Six Oil Co.'s W. L. Kingland 1, dr 1940 ft. Western Enterprise Oil & Gas Co.'s Smith & Capers 1, dr 1950 ft. J. W. Wilson et al's Whittenberg 1, sd 2780 ft.

KING COUNTY — W. G. Trammell et al's Spikes 1, rigged up. J. C. Banks Oil Co.'s Bailey 1, sd 1600 ft.

MOORE COUNTY—Amarillo Oil Co.'s R. B. Masterson 1, dr by 10-inch cas, td 1950 ft.

POTTER COUNTY—Amarillo Oil Co.'s W. H. Bush 1, dr 305 ft; J. C. Warrick 1, dr 610 ft.

ROBERTS COUNTY—Phil Engle et al's Mrs. Ledrick & Sons 1, sd 1730 ft.

WHEELER COUNTY—Cosden & Schenck's C. C. George 1, dd, sd 2700 ft. Mid-Continent Oil Synd.'s Ember 1, sd 500 ft. W. D. Sheddon et al's B. F. Westmoreland 1, sd 480 ft. Union Petroleum & Supply Co.'s O. T. Nicholson 1, set cas 1500 ft.

Kansas Wildcats

BARBER COUNTY—R. B. Brown's No. 1, NWc SW NE 33-30-14w, sd 3505 ft; Elsa No. 1, SWc 27-32-14w, rig up.

BARTON COUNTY — Cheyenne Oil Co.'s Sooy 1, SWc SW 27-18-12w, sd 3525 ft. Haynes et al's No. 1, NWc 31-12-12w, sd 1700 ft. Mountain States Oil & Gas Co.'s No. 1, SEc NE 22-18-13w, standardizing 3214 ft. Jasper

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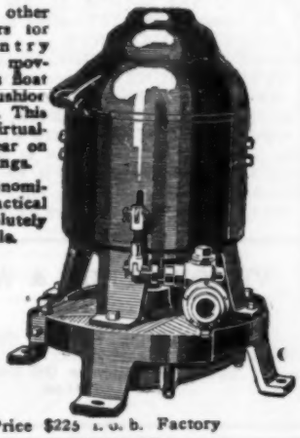

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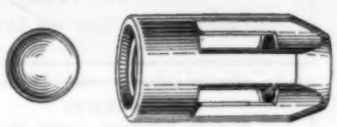

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& Bechka's Schauf 1, SEc NW 11-16-12w, dr 2920 ft. Huffine et al's Smith 1, C NE SW 21-19-12w, rig down. Streeter & Stearns' Brown 1, NEc SW 21-19-12w, sd 3505 ft.

COFFEE COUNTY — Sunbeam Pet. Co.'s Andrew 1, NWc NE 30-20-15, rig up. Thad O'Day's Allen 1, NWc SE 13-21-15, sd 900 ft. Manhattan Oil Co.'s Elliott 1, NWc SW 14-33-13, sd 350 ft. White Eagle Ref. Co.'s No. 1, SWc NE 26-19-13, dr 2020 ft. Braden Bros.' Beyer 1, SEc NW 13-22-13, lcn.

CLARK COUNTY—Watcham O. & G. Co.'s Morrison 1, SEc NE NE 2-22-21w, sd 469 ft.

CLOUD COUNTY—Livingston et al's Murdock 1, NEc 7-6-4w, sd 365 ft.

ELLIS COUNTY—J. Allen Harvey's Polifka 1, SEc NW NE 18-13-17, set cas 2630 ft. Jas. Davis et al's Smith 1, NWc 14-13-16w, sd 1600 ft.

GEARY COUNTY—Liberty-Texas Oil Co.'s Wright 1, NEc 9-12-6, sd 750 ft; Foster 1, NEc SW 30-12-6, sd 2000 ft.

GRAHAM COUNTY—Keyes Bros. & Marine's Taxton 1, SEc NW 23-8-24w, sd 100 ft.

FINNEY COUNTY—Garden City O. & G. Co.'s Wann 1, SEc SE 36-21-30, sd 2890 ft.

COVE COUNTY—Keyes Bros. & Marines' Unknown 1, NWc SW 23-13-26w, lcn.

JEFFERSON COUNTY—Northern Counties' Edwards 1, SEc NW NW 13-8-19, sd 3405 ft.

KINGMAN COUNTY—Salex et al's Garner 1, SWc NW 34-27-7, sd 2543 ft.

LINCOLN COUNTY—Trees Oil Co.'s Kohler 1, SEc 36-11-10w, set cas 3450 ft. Berry & Rosenthal's Lambert 1, C NW 31-12-10w, dr 2740 ft. Amerada Pet. Corp.'s Crawford 1, NEc SW SE 16-11-7, dr 2175 ft. Equity Oil Co.'s Jellison 1, NWc SE 19-13-9, sd 2700 ft. Scott & Collins' Stone 1, SEc SW NE 19-11-6w, sd 50 ft.

NEMAHA COUNTY — Nemaha O. & G. Co.'s Meyers 1, NWc 19-3-11, sd 3250 ft.

OSBORNE COUNTY—Delhi Oil Co.'s Forman 1, SWc SW 30-10-11, sd 3300 ft.

OSAGE COUNTY — Rodgers & Bittle's Bertha 1, SEc NW 22-17-16, lcn. Mul-Vit Dev. Co.'s Neil 1, NEc NW SW NE 8-17-17, sd 2735 ft. Moyer et al's Williams 1, NEc SW NW 12-18-14, dr 550 ft.

POTTAWATOMIE COUNTY—Crawford et al's Stewart 1, C E L SE SE SE 17-9-12, rig up; Greischabert 1, SWc SE SE SW 31-9-18, rig up; St. Mary 1, SWc 11-1-12, sd 2290 ft.

RICE COUNTY—Rino Oil Co.'s Decall 1, SEc SW NW 35-19-8w, sd 3570 ft. Emerson Casey's Bush 1, NEc 7-20-16w, sd 3565 ft. Stamey et al's Barnes 1, SEc NE 21-20-6w, set cas 2100 ft. Jasper & Bechka's Walker 1, SWc NE 10-18-6w, sd 1750 ft.

RILEY COUNTY—Pawnee Oil Co.'s Marks 1, SEc NE NW 26-10-6, sd 1700 ft.

ROOKS COUNTY—Keyes Pet. Co.'s Saindon 1, NWc SW SE 7-8-20w, spd and sd.

RUSSELL COUNTY—Merriam et al's Murphy 1, C SW 11-12-12w, sd 3630 ft. P. & R. Corp.'s Haise 1, NWc SE 24-12-15w, fsh 3512 ft. Amerada Pet. Corp.'s Milke 1, SWc SE SW 20-12-15, sd 3380 ft. Pomeroy et al's Cooper 1, SEc 33-12-11w, sd 2000 ft. Alcorn Oil Co.'s Seller 1, SEc 36-15-12w, set cas 2545 ft.

SEWARD COUNTY — C. T. Dev. Co.'s Woods 1, NWc NE 34-34-34, sd 700 ft. Seward O. & G. Co.'s Selsey 1, NEc NW 2-33-33, set cas 2427 ft.

SALINE COUNTY—Thralls et al's No. 1, SEc NE NW 15-15-4w, sd 1010 ft.

TREGO COUNTY—Keyes Pet. Co.'s Walsh 1, NWc SE 5-11-25w, sd 1700 ft; Walsh 2, SWc NE SW 5-11-25w, sd 1550 ft. Keyes Bros. & Marine's Davis 1, NEc SW 16-11-24, sd 3030 ft.

WABAUNSEE COUNTY—Williams et al's No. 1, NEc SW NE 15-13-12, dr 3600 ft.

WASHINGTON COUNTY—Barnes O. & G. Co.'s Wickham 1, SEc SW 9-5-5, sd 1305 ft.

WOODSON COUNTY — Equity Oil Co.'s Soloman 1, SWc NE NW 30-26-17, sd 3340 ft. Herman & Oglisby's Lauber 1, SWc 4-26-14, sd 560 ft.

Oklahoma Wildcats

ALFALFA COUNTY—McGuinnie & Ward's Watts 1, C NE SW SE 21-27-10w, dr 3100 ft. Armstrong, Henley & Piffles' Turnbull 1, C NW SE NW 23-24-11w, sd 50 ft.

ATOKA COUNTY — McPhearson et al's Wild 1, SWc NW 7-2-9, sd 4323 ft. Henson et al's Dabney 1, C SE NW 17-4-11, dr 1950 ft. J. P. Torrence et al's Fee 1, SWc NE 1-2-9, sd 2235 ft. Wapanuka Dev. Co.'s Underwood 1, C W L SE SE 28-2-9, fsh 1343 ft.

BLAINE COUNTY—Meyers et al's Chronister 1, SEc NW NW NE 7-18-15w, sd 965 ft. Tompson's Dickerman 1, C SE SE SE 26-15-12w, sd 3213 ft. Okomo Oil Co.'s Ekleman 1, SWc 21-13-10w, sd 2610 ft.

BRYAN COUNTY—Lyons et al's Coombe 1, SEc SW NW NE 11-8-9, sd 975 ft. Alexander's Hampton 1, SEc NE 26-7-11, sd 1400 ft.

CANADIAN COUNTY — Thos. Revelle's Dawson 1, NEc 34-13-9w, dr 2820 ft. Carroll et al's Setter 1, SEc 2-13-8w, sd 110 ft.

CLEVELAND COUNTY — Carr Oil Co.'s Holland 1, NEc SE 31-10-4, sd 2620 ft.

CUSTER COUNTY—Hoover Oil Co.'s No. 1, NWc SE 17-13-14w, sd 2510 ft. Magnolia's Cutfinger 1, NWc SE 17-13-14w, dr 2728 ft.

COAL COUNTY—Basie Oil Co.'s Heck 1, SEc 18-2-9, rig up. Bearman et al's Payte 1, SWc NW NE 32-2-9, sd 2780 ft. Guy Vaughan's Nichols 1, SWc 1-1-11, rig up.

GRANT COUNTY—Embry et al's Edwards

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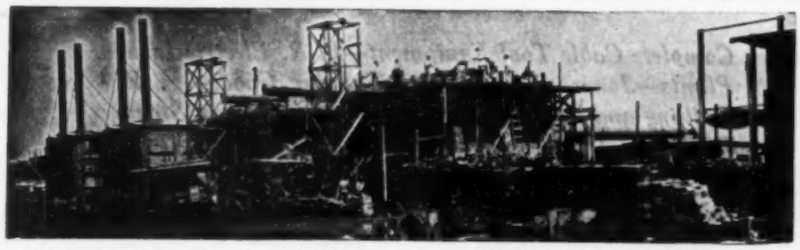

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GREER COUNTY—Neal et al's Johnson 1, SEc NE NW 3-7-22w, sd 1200 ft. Boss & Terrills' Van Victor 1, C SW SW 4-3-22w, dr 1412 ft.

HUGHES COUNTY—Furhamn Pet. Co.'s O'Miller 1, SWc SE SE 5-7-9, sd 3523 ft. Mathers & Skelly's McClain 1, C SW SW 4-5-11, sd 3026. Dixie Oil Co.'s Irvine 1, SW NW SE SE 18-8-10, dr 3100 ft.

JEFFERSON COUNTY — Shawver et al's Anderson 1, SEc NE 31-4-8w, sd 1200 ft. Landis et al's Standfield 1, SEc 33-7-6w, sd 1150 ft. Roy Johnson's Mullen 1, NEc NW 9-4-4w, dr 1535 ft. Barker et al's Major 1, C SE SW 34-5-6w, spd and sd. Godley Oil Co.'s Woodworth 1, C NE NW 36-5-4w, dr 250 ft.

JOHNSON COUNTY—Washita O. & G. Co.'s Trootes 1, C SE SE 7-4-4, sd 2180 ft. United "8" Oil Co.'s Holden 1, NWc SW NW 36-5-6, sd 2330 ft.

KAY COUNTY—Day Oil Co.'s Vandatta 1, SWc NW 8-26-2w, sd 2835 ft.

KIOWA COUNTY—Connor et al's No. 2, NEc NW NW 34-7-10, fsh 1548 ft. Aubyme Oil Co.'s No. 1, SWc NE 3-7-17, sd 1805 ft.

LINCOLN COUNTY—Sun Ray Oil Co.'s Gallagher 1, C N L SE SE 18-13-5, dr 3600 ft. P. & R. Corp.'s Hainzig 1, SWc NW SW 14-13-6, r 2450 ft. Douglas Oil Co.'s Ewing 1, NWc 7-13-3, dr 2940 ft. J. C. Cook's Richardson 1, SWc NE SW 8-12-5, sd 1325 ft. Eugene Costa et al's Dodrill 1, SEc NW 26-12-?, sd 1476 ft.

LOGAN COUNTY—Buford-Brim Oil Co.'s 1, C SE SE NW 20-26-4w, sd 1000 ft. Midwest & Gulf's Moon 1, NEc NW 8-27-8w, sd 2300 ft. Phillips Pet. Co.'s Riding 1, NEc SE NW 29-29-4w, dr 3200 ft. Frank Travis et al's Fuss 1, SWc NW NW 3-27-4w, sd 900 ft.

LOVE COUNTY—Wichenheiser et al's Bear 1, NEc SE 13-5-5, sd 2370 ft. Driller Syndicate Oil Co.'s Wilson 1, NWc NE 11-7-2, sd 2830 ft.

MAJOR COUNTY—Texas Prod. Oil Co.'s Basin 1, SWc 36-22-14w, spd and sd. Bradstreet Oil Co.'s Ratcliffe 1, C SW 9-22-9w, sd 2810 ft. Frantz & Slicks' Gray 1, C NW 36-21-11w, sd 1000 ft.

MARSHALL COUNTY—P & H Oil Co.'s Franklin 1, C E L NW NE SW 34-6-7, sd 2008 ft. Simms Oil Co.'s Starritt 1, SEc NE SE NE 29-6-3, dr 1580 ft.

PONTOTOC COUNTY — Harper et al's Dener 1, NWc SE SE 19-6-7, dr 2600 ft. Smith et al's Norris 1, SWc SE 34-4-6, sd 2430 ft. Riverside Oil Co.'s McFarland 1, NWc NE NW 4-5-5, sd 650 ft. Roy Carter's Burk 2, NEc SE SE 32-5-5, sd 2960 ft. C. J. Wrightsman's Floyd 1, SWc NW NE 2-4-7, dr 2055 ft. Galloway et al's Hays 1, NEc SE NW SW 13-3-6, sd 1160 ft. Craig et al's Starritt 1, NWc NE 5-4-5, sd 600 ft.

OKLAHOMA COUNTY — Firestone Oil Co.'s School 1, NWc SE 36-11-3, dr 4190 ft.

POTTAWATOMIE COUNTY — Ossie Oil Co.'s Howell 1, SWc NE 13-10-2, dr 2800 ft. Davis Detrick's McGathey 1, SEc 10-6-2, dr 3845 ft. H. C. Guinnup et al's Floyd 1, SWc SE 12-11-3, sd 3670 ft. North American Oil Co.'s Madgett 1, NWc 25-10-4, sd 460 ft. Maud Oil Products Co.'s Yinson 1, NEc SW 18-7-4, sd 2935 ft. McMann Oil Co.'s Neghan 1, SWc NW 12-7-4, sd 100 ft. Day Oil Co.'s Bell 1, SEc NW NE 9-5-3, sd 4006 ft. Halmond Osmond et al's Fiddler 1, SEc NW 4-5-5, sd 545 ft.

ROGER MILLS COUNTY—Twin Hills Oil Co.'s McClure 1, NWc 15-15-26w, dr 3200 ft. Trio Oil Co.'s No. 1, SEc NW SW 3-13-26w, sd 3060 ft.

SEMINOLE COUNTY — Maxwell et al's Charty 1, C NE NW 33-6-6, dr 1720 ft. Link Oil Co.'s Carolina 1, C SE NW 14-6-7, sd 2840 ft. T. B. Slick's Sanny 1, 19-6-7, dr 3295 ft. Wm. McDougal's Dindy 1, C SW SW 30-6-7, sd 3350 ft. R. F. Garland's Farlin 1, C NE NW 6-6-18w, sd 1120 ft.

WASHITA COUNTY—McCoy et al's Praetters 1, C SW SW NE 9-8-15w, sd 3115 ft. Sun Ray Oil Co.'s Rice 1, SEc 33-8-18w, sd 2184 ft in granite.

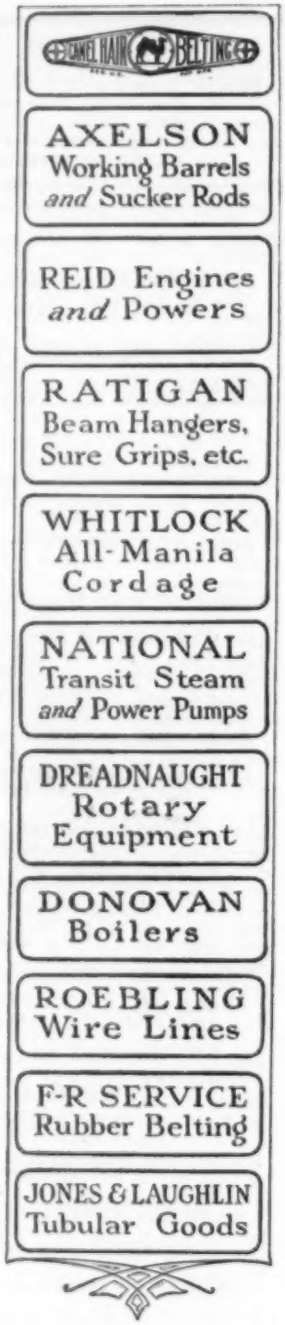
WOODS COUNTY—Victor Oil Co.'s Van Buskirk 1, SWc SE 10-25-15w, sd 960 ft.

PRODUCING OIL ROYALTIES

An experienced engineer and royalty buyer will make an attractive proposition to an individual or group of men able to finance the purchase of producing and proven royalties in the North-Central and West Texas fields. References exchanged.

Box 263, care of The OIL WEEKLY.

Wanted—by responsible Gulf Coastal oil company, first class oil field scout with gulf coastal experience. Also want young man with legal experience as assistant in land department. References. Address Box 65, care The OIL WEEKLY.



Bon voyage

THE SECOND International Petroleum Exposition and Congress is all but ended. In milling tens of thousands friends have come and gone. Royalty selected and exalted by the Industry has ruled the vast pageant. Here has been represented power and influence and wealth beyond mortal conception. Here, in a temporal way, has been a thing more extraordinary than the Passion Play of Oberammergau.

And more than ever before, if possible, it becomes an honor and a pleasure to serve the every-day needs and participate in the unusual demonstrations of an Industry as illimitable as this.

To Oil Men everywhere, until we meet again in 1925—Bon Voyage.

Complete Cable Tool Equipment—F. R. Electric Light Plants—Jones and Laughlin Tubular Goods—F. R. Drilling and Pumping Service Belting—Warren Steam Engines — Johns-Manville Packings — Roebling Wire Lines — Carbic Oxy-Acetylene Welding and Cutting Apparatus, etc.

The Frick-Reid Supply Co.

Tulsa, Okla. Pittsburgh, Pa.

West of the Mississippi—Stores Everywhere

In Oil Country Equipment—the most HUMAN organization in America

NEW EQUIPMENT, CATALOGS, BULLETINS, BOOKS

Heat Treating Furnaces Convenient for Field Use

Several types of furnaces for heat-treatment of bits in the field are being offered for distribution by the Chicago Flexible Shaft Company, 5600 Roosevelt Road, Department 1100, Chicago, Illinois.

These furnaces are designed for heat-treatment of long pieces of iron as well

The Stewart No. 0-200 Pot Furnace

as for annealing small forgings. The No. 36 oven furnace is of the semi-muffle construction which insures accurate temperature control and even heat.

The Stewart 0-200 pot furnace is the type used to harden the tips of bits by immersion in a molten salt bath. This furnace may be fired with either oil or gas. A pyrometer control insures against overheating.

It is claimed by the manufacturers of these furnaces that nine out of ten fishing jobs can be prevented by using a Stewart pot furnace and molten salt baths for heat-treating bits.

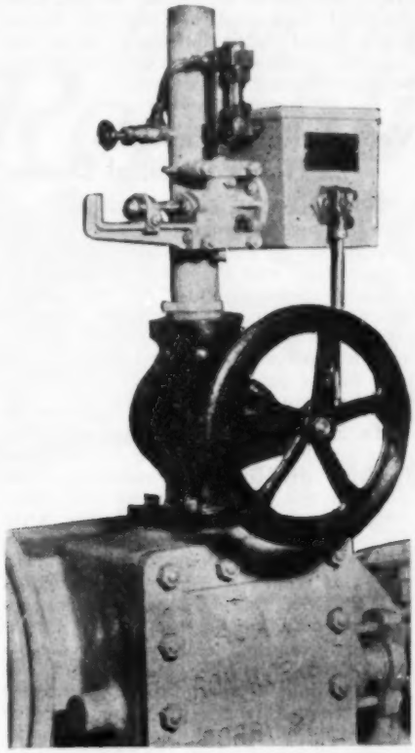
Sizes and prices will be furnished upon application to the company.

Valveless Lubricator For Steam Drilling Engines

A force feed valveless pump lubricator which automatically feeds the oil into the cylinder of a steam driven engine, has been perfected by A. H. Carson of Fort Worth, and the patent is now owned by the Valveless Lubricator Company. Negotiations have been completed to have this lubricator manufactured by the Ajax Iron Works, Corry, Pa., and it will be placed on the market by the National Supply Companies under the trade name of the "Ajax-Carson Lubricator."

The Ajax-Carson Lubricator screws into the throttle valve of a steam engine, and can be adapted to almost any type of steam driven machinery. The absence of valves within the lubricator makes it fool proof. The pump has four speeds, and automatically feeds the oil into the steam cylinder in whatever amounts that are required, while the flow of oil is controlled by the speed and the stroke of the plunger on the pump.

Complete particulars can be obtained from the Ajax Iron Works, Corry, Pennsylvania.

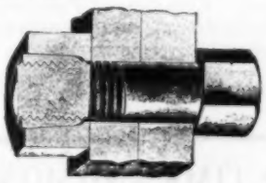


The Ajax-Carson Lubricator in position on a drilling engine

Columbia Lock Nuts Stay Put and Give Good Service

Trouble with nuts coming loose and thereby causing serious damage to machinery, can be avoided to a large extent by using Columbia Lock Nuts, say the manufacturers of these nuts.

The Columbia Lock Nut consists of two parts which combine in a perfect unit. The inner part is threaded to receive the bolt, also slotted throughout its length and tapered downward to fit a corresponding taper on the inside of the outer part.



When the wrench is applied to the outer part, or binding nut, the inside part travels down the tapered sides, closing the slot and firmly imbedding the threads of the nut in the "V's" in the thread of the bolt. The inner part pinches and clinches at the same time. When it is drawn down flush with the top of the binding nut, the two parts are united in a deadlock of security.

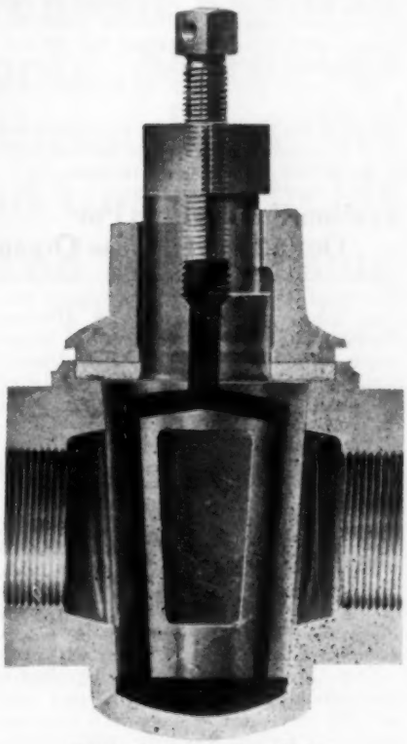
Instructions for putting on Columbia lock nuts are to apply the wrench to both parts of the nut and turn down until the parts are drawn absolutely to place; then to lock, apply the wrench to the top slotted part, and screw it down until its cone part is completely buried. If the nut is to be used where parts of the work are not to be drawn together, turn the bottom part to position, hold the wrench and screw the slotted part to a positive lock. Both parts are then locked and neither can move.

Further information can be obtained from the Columbia Nut and Bolt Company, Inc., Bridgeport, Connecticut.

Plug Cock Type Valve Has Special Features

Merco Nordstrom Plug Valves, marketed by the Merco Nordstrom Valve Company, San Francisco, California, are of the plug cock type with special lubrication and lifting features.

The plug in the Merco valve is never separated from its seat sufficiently to



Merco Nordstrom Plug Valve

allow the entry of foreign matter. Lubricants are used under pressure to release the plug against the compression of the gasket. This creates a very small space into which a film of lubricant is automatically forced as the plug is turned.

By lifting the plug slightly a space is created for the lubricant.

These valves are quarter-turns and a stop is cast on the cover to indicate clearly to the operator the direction in which to turn the plug for opening or closing.

A check valve permits the removal of the lubricant screw, thus enabling the operator to insert the lubricant while the valve is under pressure and temperature.

The plug is held in its seat at all times by an anti-friction washer and asbestos packing.

Complete details will be furnished by the company upon application.

Manufacturer and Supply Dealer Notes

A. O. Smith Corporation Announces Staff Changes

Milwaukee, Wis., Oct. 7.—The A. O. Smith Corporation announces the appointment of Carl C. Joys, Jr., as mananger of sales for the Oil Field Products Division.

After leaving the University of Wisconsin in 1909, Mr. Joys went to California and entered the employ of the Honolulu Consolidated Oil Company, and worked in the Maricopa and Taft fields. In 1913 he was selected to open the Eastern district for the Lucey Manufacturing Company, with headquarters in Pittsburgh.

In 1919 the Steel Tube Company of America appointed him district sales manager in New York City, in charge of the Eastern territory and export business.

Carl Hochenauer, who has been acting as sales manager, now becomes district sales manager of the Oil Field Division, with headquarters in the Thomas Building, Dallas, Texas.

The Tulsa office will be in charge of A. E. Butts.

Plans are being made by the company to establish offices in several other localities in the near future.

Axelson Employes to Put Out 12-Page House Organ

Los Angeles, Calif., Oct. 8.—Employes of the Axelson Machine Company are contributing their literary talent to the production of a new house organ to be known as the Amco Broadcast. The bulletin is to be published weekly, and is to consist of 12 pages. Its contents will consist of material regarding activities of the factory interspersed with comical contributions.

Titusville Draw Works Help Make New Record

Titusville, Pa., October 8.—A new drilling record was made recently in the Luling, Texas, oil field with the Titusville Acme Four Speed draw works.

The McKinley Drilling Company completed Rios No. 13 to the pay sand at 2200 feet, in five days and nineteen hours. Previous records to the same sand showed about eight days for the completion of a well.

This new record is considered the more remarkable because every joint of drill pipe had to be made. It was also the first well that a Titusville Acme Four Speed outfit had been used on, and the outfit might naturally be expected to work a little stiff.

Veteran Pump Expert Is Honor Guest at Dinner

New York City, October 8.—William Schwanhausser, chief engineer for the Worthington Pump and Machinery Corporation was the guest of honor at a dinner given recently by officials of the corporation. The dinner was in honor of Mr. Schwanhausser's seventieth birthday, and marked the fortieth year of his continuous service with the Worthington organization.

Mr. Schwanhausser, a native of Bavaria and a graduate of the Polytechnic Institute of Mittweida, came to New York in the early seventies and after eight years of service with the Otis Elevator Company, in 1884 became assistant superintendent of the pump works of Henry R. Worthington. From 1901 to 1906, Mr. Schwanhausser was general manager of the Worthington Company, and since 1906 has served as chief and consulting engineer of the International Steam Pump Company, later reorganized into the present Worthington Pump and Machinery Corporation.

Colorado Company to Sell Hazard Wire Lines

Denver, Colo., Oct. 8.—The Longhart Supply Company of Fort Worth, Texas, has been appointed distributors in Colorado, Wyoming and Montana for the Mazard Manufacturing Company of Wilkes-Barre, Pa., manufacturers of Hazard wire lines.

Rocky Mountain offices of the Longhart will be located here and will be in charge of L. L. Rector, formerly of Fort Worth.

Miss C. B. Hagenbuch, secretary and treasurer of the Charles N. Hough Manufacturing Company, Franklin, Pa., well known among oil producers, was in Tulsa attending the exposition. She is one of the few women officers in oil well supply manufacturing companies.

Merger Brings Together Big Engine Companies

Los Angeles, Calif., October 8.—A merger recently announced in this city brings together the two largest and foremost builders of internal combustion engines on the Pacific Coast. Henceforth the Enterprise Engine Company of San Francisco, and the Western Machinery Company of Los Angeles, will operate as one organization with headquarters here. This new organization creates for the Western States an organization of first magnitude having engineering, manufacturing and distributing facilities adequate for the complete power requirements of this section of the country.

The Western Machinery Company is the older in point of years, of the two companies, having started in the manufacture of internal combustion gas and gasoline engines approximately a quarter of a century ago as the Western Gas Engine Corporation. From its inception, the company met with success, and its growth has been remarkable. Foreign distribution of the company at this time compares favorably with any other like organization in the country.

Early in 1916 the Enterprise Engine Company was started in San Francisco. Like the Western Machinery Company, the Enterprise concern manufactured a gasoline or distillate engine of modern type. While the engine was designed primarily for marine purposes, it also was built in the stationary type.

Natural progress in the development of their various types of engines coupled with the changing conditions in the fuel oil markets, resulted in the course of time in the production by both companies of engines of the Diesel type.

Officials of the Enterprise and Western companies who will be actively identified with the new organization, are as follows: Western Machinery Company, Wm. Angus, president and general manager; George F. Guy, vice president; Sam Kahn, treasurer; W. R. Hale, secretary; J. M. Davis, sales manager; J. H. Suter, chief engineer. Enterprise Engine Company: Charles J. P. Hoehn, president; H. E. Morgan, vice president; A. J. Martens, treasurer; Wm. J. Donlon, secretary; H. E. Martens, director.

Pennsylvania Firm Opens Branch in Oklahoma

Oklahoma City, Okla., Oct. 8.—A charter has been granted to the Erie City Iron Works of Pennsylvania to do business in Oklahoma. The capital invested in the state is given at $10,000.

Development at Panuco.

Mexico City, Mex., Oct. 3.—As a result of successful operations already under way, the Mexican department of industry has announced that development work in the Panuco district in the state of Vera Cruz are highly encouraging and that the department is handling an unusually large number of applications for drilling.

SAVE TIME AND MONEY DEALING WITH

The Largest Manufacturer of

BACK PRESSURE VALVES
BRASS OIL WELL SUPPLIES

All Sizes and Weights
For "Drill" and "Line" Pipe
Special Kinds Made to Order

Founders — Finishers — Platers

Write for Price List

Southern Brass Mfg. Co.
Houston, Texas, U. S. A.

It's just a Short Haul from the nearest Republic Supply Store to Your Well

The convenient location of Republic Supply Stores at strategic points throughout the Mid-Continent and Coastal fields means economy and time-saving to the operator. Through Republic Service, complete stocks of oil field equipment are conveniently at hand to quickly serve you in any emergency. Republic Supply Stores Stock;

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and †Stores at

*HOUSTON, TEXAS

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*SHREVEPORT LA.

†El Dorado, Ark.
†Smackover, Ark.

*WICHITA FALLS, TEXAS

†Graham, Texas
†Breckenridge, Tex.
†Electra, Texas
†Burkburnett, Texas
†Wilson, Okla.
†Duncan, Okla.

*TULSA OKLAHOMA

†Tonkawa, Okla.
†Yale, Okla.
†Shidler, Okla.
†Beggs, Okla.
†Slick, Okla.
†Bristow, Okla.
†Wewoka, Okla.
†Hominy, Okla.
†Okemah, Okla.

Republic Iron & Steel Co.'s Tubing, Casing, Drive and Line Pipe.

Standard Seamless Tube Co.'s Seamless Upset Rotary Drill Pipe.

American Well & Prospecting Co.'s "Gumbo Buster" Rotary Equipment.

Jones' Acme Sucker Rods.

American Steel & Wire Co.'s and Broderick & Bascom's Wire Rope.

Hughes Tool Co.'s Hughes Rock Bits, Hughes Disc Bits, "Acme" Tool Joints.

Bovaird & Seyfang, and McNamar Oil Field Boilers.

Jones' Acme Gas Engines.

REPUBLIC SUPPLY CO

Say you saw it in The Oil Weekly

LETTERS OF Paul Peebles P.S.G.

mi deer cleopatry

well cleo hunny I hope it will not be 2 mutch of a disapointments 2 yu 2 no that I hav got on the way to tulsey without no help from yu on account yu throwed me down rite at the last minnit like. I had 2 git anuther woman 2 help me out this time but yu need not 2 pay that no never mind, it is a small matter cleo & will not amount 2 nuthin in the end.

well 2 start in the beginnin & tell yu the strate facks before that onnery slim gits a chants 2 make up some kinder of a li about it I will tell yu jest how it is. well I guess yu cood tell bi the ietter whitch I rit yu last weak that I was kinder down in the mouth after yu had ritten that yu cood not send me no munny. well the widder where I bords at seen it was sumthin the matter & she gotten 2 askin questens so I told her that mi brite future was about 2 be ruined because I cood not go 2 the tulsey exposition & congress on account I did not hav no munny on account of times bein so hard with me hear lately. I did not tell her about yu not sendin the munny on account it aint none of her bizness & I do not want nobody 2 no that yu wood treet me that away ennyhow, hunny. & besides I noed that the less I sed about enny other woman the moar simperthy I wood git from her.

wtll 2 make a long story short she finly sed I cood go in the car whitch I bouten for her. yu no what I meen cleo—I did not reely buy it for her onli went with her when it was bort & pade for it with munny whitch I had in mi pocket for her. I no it looks kinder suspishus hunny, but ennyhow that is the way of it. so I had sum munny alreddy & she sed she cood advance a little for gasleen & so I desided that that wood be a good way for me 2 go on account I can sleep in the car & live cheep on the rode. so I am alreddy as far as dalles & will be in tulsey in a day or 2 if the rodes dont git no worse.

I gess the widder wood a not bin so anxshus for me 2 take the car escept I found out she wanted 2 cum 2 dalles her own self & she is goin 2 stop hear with her sister & go 2 the dalles fare whilst I go on 2 tulsey & then cum back & pick her up & take her on back 2 huston whitch does not quite fit in 2 mi plans for goin back by arkansaw when I go back, but it does beet ridin on frates. even a ford is better than the rods on a s. p. frate trane or a katy ether 1, whitch is worse in spots.

but ennyway she was willin 2 help me out & did it, whitch is moar than I can say for sum other peepul whitch I no.

well hunny I wood a got hear moar quicker if I had a not stopped 2 do sum geeology work in the root. yu no hunny I have not did a great deel of investigatin in the central east texas feelds on account I have speshulized moar or less on salt domes in the coast country & sour watter & sulfer. so I was ridin along keepin mi I peeled for a structur whitch mit look promisin up hear in this cuntry where the more importenter thing than even findin oil is 2 lokate the austin chalk. i aint never yet understood why they was so anxus about that chalk, but i thought as long as they wanted it I wood keep mi I peeled.

so while I was drivin along threw sum kinder hilly cuntry whitch is difrent from goos creek I seen on the side of a hill where it was sum white lookin stuff so I sed 2 the widder that I wood have 2 go look at that because it was a outcrop of the austin chalk. well she did not want me 2 fool with it on account she was in a hurry 2 git 2 dalles the same day on account we did not want 2 stop on the rode, but I am all waze firm with wimmin, cleo, so of course we stopped.

well I goes over 2 this place & it was a cincht that it was the chalk the way it looked 2 me at first, so the next farmer I seen I says 2 him had it bin enny rock hounds around them parts & he sed it was so menny workin threw there that they was about 2 tromp all the grass off the pastures, well i thot from that that they must a shorly seen that outcrop & I asted him if enny of them had ever menshun it & he sed no so I told him I was a geeologist miself & had noticed sum good oil sines & wood giv him a opinyun on his farm if he wood pay me & then he wood no how soon he cood count on gittin ritch.

well he sed that he did not kare how soon he got ritch but he did not see no reesen why he shood spend munny findin out if he is, so he wood not giv me the job, whitch shows yu hunny how it is with us geeologistsis. we are not appreciated by the grate american publick.

& ennyway, he sed that they was fixin 2 drill a wildcat up there close 2 that ole lime kill.

so it was not no outcrop of the chalk after all, hunny. I noed it all the time but was a slick way i had of findin out for sure without makin no fool out of miself. of course I noed hunny that everything that is white is not chalk.

but all the same that widder shore was mad at me about stoppin so long for what she thought was nuthin. she sed 2 me that enny fool ort 2 no better than that. she shore did make me mad, hunny, & if things had a not bin like they wuz & me wantin 2 take the car on to tulsey, I wood a left her right there & then. sum of these days when i can pay up my back bord i am goin 2 show her that she cannot fool with me.

so hunny yu see how it is between me & her. so yu need 2 not be worried none about me & her. yu are the onlies woman what I hav got anny feelin for, escept in a friendly kinder of a way.

I shore am lonesum for yu hunny. it sumtimes looks like fate is hard 2 put sutch a berrer between us. i want 2 be neer 2 yu all the time & i wood not be going off like this unlessen it was on account of mi bizness & it mabe meenin that me & yu can be together all the time a little latter on. yu can not never tell what will happen, so all we can do is wate & I will cum down 2 sea yu whenever I get a chanct.

yore lovin paul

p. s. if I do not rite 2 yu from tulsey yu will no it is because I am to bizy, but i am pretty shure that I can find time 2 rite. i am made up mi mine 2 make sumthin out of this trip in 1 way or anuther & mabe I can make enuff stake 2 open up a reel offis when I git back 2 huston & mabe live at a hotel & not stay in no moar widders bordin house. then i gess i can cum 2 sea yu. pp

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Work Started on New Empire Gas Pipe Line

Bartlesville, Okla., Sept. 27.—The Natural Gas division of the Empire Companies has started the construction of a 10 and 12-inch gas pipe line to be built between the Burbank field and Myers Junction, which is about nine miles northwest of Pawhuska, where it will intersect with existing lines owned by subsidiary companies of the Empire.

The new line will be approximately 20 miles long and of welded construction throughout. The line is to be completed in 45 days.

This new branch of the Empire system will have an approximate daily capacity of 17,000,000 cubic feet and will be connected to existing lines in such a way that will add materially to their flexibility. Through this new line of the Empire natural gas system gas may be transported from the Burbank area east through the Caney and Bigheart compressor stations for delivery to either the Kansas Natural or Quapaw trunk lines, or in the event additional gas is needed in the towns served by the Wichita branch through Cambridge station gas which originates in the Creek County and Osage districts can be diverted through this new line.

PERFECTION VAPOR PRESSURE TANKS
WOOD, AND BOLTED STEEL TANKS

Perfection Flow Tanks Eliminate Gas Traps

IT'S needless expense to set a gas trap in the flow line of a gasser making oil.

For with a Perfection Vapor Pressure Flow Tank, you can do a better and cleaner job of separation. No oil escapes with the gas and on the other hand the oil is scrubbed absolutely clean.

There is a moral in the picture above, illustrating the subject under discussion. One of the biggest producers in the country (name on application) was attempting to handle 40 million cubic feet of gas and 2,500 barrels of oil on a lease in the Cromwell Pool, Oklahoma, with two gas traps (left in picture) and a flow tank (not shown above.)

Becoming convinced that a better and cleaner job could be done with a Perfection Vapor Pressure Flow Tank, this concern dispensed with the two gas traps. The portion of the picture on the right shows how the tank was equipped to handle the heavy gas flow.

And what's more important, the installation is meeting with the approval of everyone.

There is no question but that the Perfection Vapor Pressure Flow tank is the most economical piece of oil field equipment a producer can buy.

Figuring up sales to gasoline plants, many operators have saved themselves thousands of dollars and they unhesitatingly give full credit to the Perfection Vapor Pressure Flow Tank.

It is after all only an integral part of the Perfection Vapor Pressure battery, every individual unit of which, saves its owner money.

Perfection Vapor Pressure Tanks
Pay Daily Dividends

Black Sivalls & Bryson
INC.

BARTLESVILLE ~ OKLAHOMA

Branch offices in all principal active fields

Gulf Refining Company

OKLAHOMA
TEXAS
LOUISIANA

Refiners of PETROLEUM

GASOLINE
REFINED OIL
NAPHTHA
GAS OILS
PARAFFINE WAX
ASPHALT
FUEL OIL
LUBRICATING OILS
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General Sales Offices: PITTSBURGH, PA.

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PHILADELPHIA

Ocean Terminals

Beverly, Mass.
Gibson's Point, Pa.
Port Tampa, Fla.
Port Arthur, Texas

Bayonne, N. J.
Savannah, Ga.
Gretna, La.

Providence, R. I.
Jacksonville, Fla.
Galveston, Texas

Magazine Point (Mobile), Ala.

SQUEAKS from the BULL WHEEL

"So you went after the job. I thought you believed that the office should seek the man?"

"I do, but this is a fat job, and I was afraid it might get winded before it reached me."

"I heard your son was an undertaker. I thought you said he was a physician."

"Not at all. I just said he followed the medical profession."

"Strange, Dick likes Gladys so."

"Why, she's not bad."

"That's what makes it so strange."

"Last evening, sir, I distinctly saw my daughter sitting in your lap. What explanation have you to make?"

"I got here early, sir, before the others."

Mrs. Peppercorn (reading): "One of the idols most revered by the Japanese is that represented by the figure of a woman, seated, resting her chin in her hand."

Mr. Peppercorn: "Very interesting, my dear. Proves that the Japanese are among the wisest people of the earth."

Mrs. P.—"How so?"

Mr. P. (impressively): "Because they deify a woman who gives her chin a rest."

Any girl can be gay in a nice
coupe;
In a taxi they all can be jolly;
But the girl worth while is the
girl who can smile
When you're taking her home
in a trolley.

She (after a tiff)—It is not nice of you to be always so monosyllabic, Max.

He—Well, call me Maximillian!—Der Brummer (Berlin).

Nine-year-old Marian is her Aunt Marian's pet. And whenever auntie, who is a successful young business woman buys herself any luxury she buys one for Marian, too. For instance, when she bought an unbrella for herself she bought Marian a parasol. She bought a big rocking chair for herself and Marian a little one.

And the other evening she came home with a new beau, who was one of those nice, little fellows whom nature has made of the diminutive order. For a minute Marian eyed him and then she asked, "All right auntie, I like him. But where's yours?"

"My wife says she will leave me if I don't quit smoking," said Mr. Meekton.

"Going home to her mother?"

"No. Her mother smokes more than I do."—Washington Star.

"It says here the world uses between 3,000,000 and 4,000,000 needles a day," remarked Mrs. Grouch.

"Must mean phonograph needles," growled her husband, "because the wives certainly don't use the other kind any more."—Brooklyn Eagle.

Mistress—"But why did you leave your last place?"

Cook—"'Cos the master used to have such rows with the missus."

"What did they quarrel about?"

"The way the meals was cooked."—London Mail.

"What is the difference between 'well-known' and 'popular'?"

"Well, I can tell you in a sentence. Mr. Volstead is probably the best-known man in the land today, but you couldn't call him the most popular."—Detroit Free Press.

"What fool told you to place those papers on that file?"

"You did, sir."

"Well, leave them here—you're discharged for calling me a fool."—London Answers.

"This paper has a most remarkable picture of a woman swimmer."

"What's so strange about it?"

"It shows her actually in the water!"—Judge.

"My papa is a mounted policeman," said little Freddie to his mother's caller.

"Is that better than being a walking policeman?" she asked.

"Course it is," replied Freddie. "If there's any trouble he can get away quicker."—Boston Transcript.

"I've made up my mind to buy a new car."

"That so? What make are you going to buy?"

"I'm keeping that a secret. If I were to tell you the type of car I've decided to purchase you'd start right in to tell me what a lemon it is."—Detroit Free Press.

Diner—Hey, waiter, this asparagus hasn't any tips.

Waiter—Oh, those are for the waiter.—Amherst Lord Jeff.

Two men are talking, and one is carrying an automobile under one arm.

"My! But you must be strong!"

"Oh, this is a light 'six'!"

Be sure, when you think you are fleeing temptation, that you are not in reality turning your back upon opportunity.

On a cold winter night at Ft. Ontario, N. Y., in 1899, a belated soldier approaching the post was challenged by a sentinel, the following dialogue ensuing:

Sentinel—Halt, who is there?

Trooper—Friend.

Got anything on your hip?

Somebody told you.

Advance to be hypnotized.

The quiet of the night was broken by the "pop" of a cork and a gurgle-gurgle-gurgle (a prolonged old soldier gurgle), followed by the tramp, tramp, tramp (a deliberate old soldier step) of the sentinel walking his post.—Judge.

"Johnny," said the teacher, "if coal is selling at $14 a ton and you pay the dealer $65, how many tons will he bring you?"

"A little over three tons, ma'am," said Johnny promptly.

"Why, Johnny, that's not right," said the teacher.

"No, ma'am, I know it ain't right," said Johnny, "but they all do it."—Judge.

The sergeant shook the bunk artist and informed him that reveille had blown.

The latter opened his eyes and yawned lazily. "What time is it, sarge?"

"Six-fifteen," exploded the sergeant, "snap out of it!"

Slowly putting on one sock the slumber prince said, "Do you know, sarge, when I die I want to kick off at 6 o'clock in the morning."

"Why 6 o'clock in the morning?"

"Because," chirped the sleepy one, "that'll be one morning I'll miss reveille."—Judge.

"Well, little chap," said the stranger in the family, picking up one of the children, "what are you going to be when you are a man?"

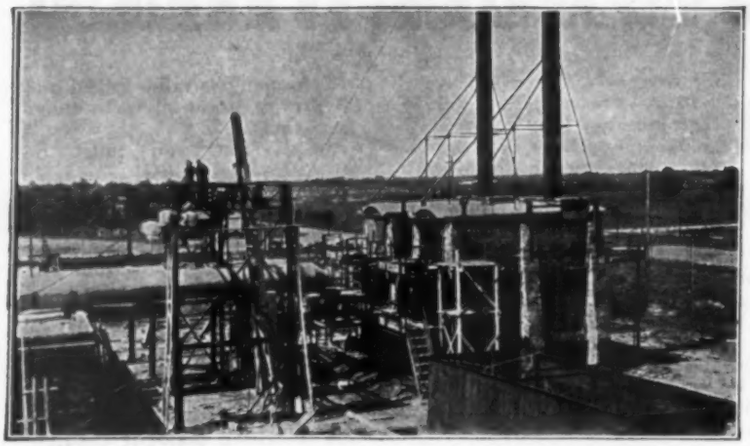
"Nuffin'," said the child.

"Nothing? Why so?" asked the stranger.

"Because," replied the child, "I'm a little girl."—Judge.

Familiar One — Which way are you going?

Fastidious One—The other way.—Wisconsin Octopus.



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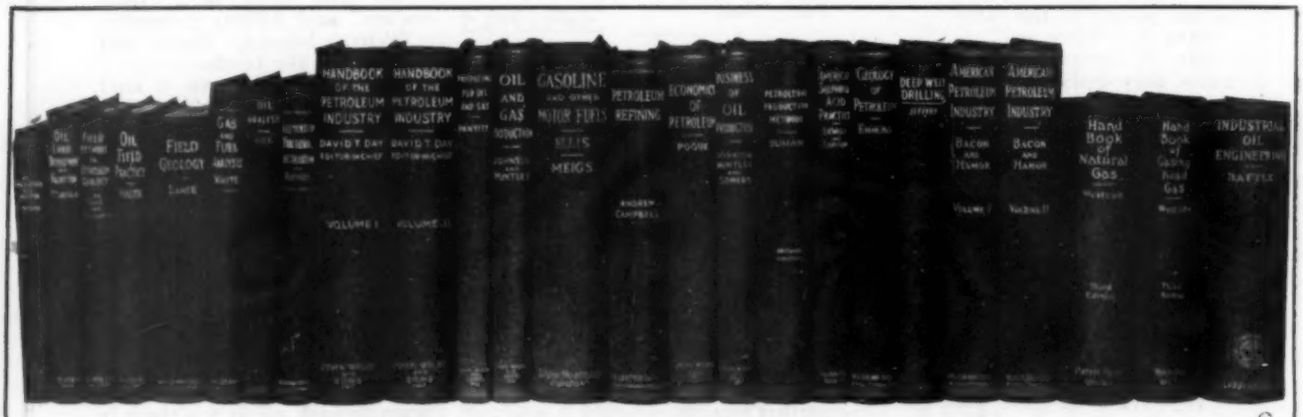

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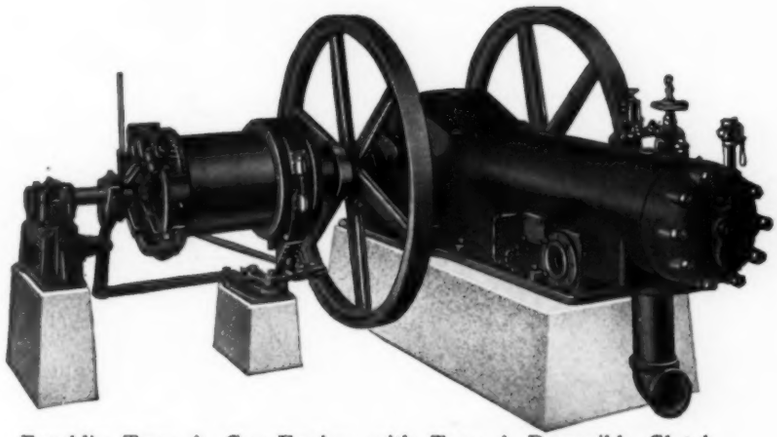
Franklin Valveless Drilling Engine



Franklin Type A Gas Engine, with Type A Reversible Clutch

A new internal combustion engine that has been thoroughly tested in drilling oil wells and now giving very satisfactory service in a number of Mid-Continent and Pennsylvania leases.

It is of the horizontal, single cylinder, two cycle valveless type—extremely rigid throughout. Particular attention has been given to the placing of metal to insure the greatest possible strength.

The cylinder instead of being cast integral with the outer wall of the water jacket and bolted to the frame, as is the usual practice, consists of a liner which is inserted in the frame and securely held in position by the cylinder head which is bolted on. Crank shaft is very heavy and well proportioned. All bearings and gears run in a bath of oil insuring the best lubrication possible.

Let our representatives at the Tulsa Convention give you all the facts.

FRANKLIN VALVELESS ENGINE CO.

FRANKLIN, PA.

Distributed in Oklahoma, Kansas, Texas, Louisiana, and Arkansas by: ATLAS SUPPLY COMPANY, MUSKOGEE, OKLA., and branches. Also INTERNATIONAL SUPPLY COMPANY, TULSA, OKLA., and branches. West Virginia by: NEW MARTINSVILLE SUPPLY COMPANY, NEW MARTINSVILLE, W. VA.

SWAN UNDERREAMER in Argentine

In far distant Argentine, the Swan is known and appreciated. There is scarcely an oil field of the world where it is not known, especially where cavey formation and hard rock are found.

Distributed universally for sale or rent by the Continental Supply Co., Leidecker Tool Co., International Supply Co., Drillers Supply Co., and the Bridgeport Branches.

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